



**HELLENIC SOCIETY  
FOR SYSTEMIC STUDIES**

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# **14TH** HSSS NATIONAL & INTERNATIONAL **CONFERENCE**

# **SYSTEMICS & TOURISM**



14 - 15 September, 2018



Hotel ELITE | Kalamata, Greece



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## **PROGRAM & ABSTRACTS**

UNDER THE AUSPICES OF



University of Piraeus  
Dept. of informatics

IN COLLABORATION WITH



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## Welcome Message

On behalf of the Hellenic Society for Systemic Studies (HSSS) we would like to invite you to the 2018 HSSS 14th. National & International Conference, organized in collaboration and under the auspices of the Department of Informatics of the University of Piraeus, Greece.

The HSSS's annual National and International Conference is held alternately in different cities of Greece in collaboration and/or under the auspices of one or more local Universities or with a contribution of a relevant international or Greek organization.

The main theme of the Conference, is to present the dynamic scientific area of "**Systemics and Tourism**" with applications in organizations and enterprises across a wide spectrum of both service and production industry sectors.

Given the dynamic nature of this challenging area, Systemics will bridge the gap between theory and practice and will promote the use of effective Methodologies and Multi-Methodologies in managing today's organizational complexity for Organizational Excellence.

Our interdisciplinary international community has the scientific systemic tools and powerful specialized software to tackle up-to-date multi-dimensional strategic complex problems and to manage their complexity in different applied areas of practice.

The prominent national and international invited speakers in the scientific program, the exciting professional panels, the professional round table, and the professional workshop, will attract the attention of a large number of our colleagues. Further, the participation of the International Federation for Systems Research (IFSR) members, the International Academy of Systems and Cybernetic Sciences (IASCYS) members, the European Union of Systemics together with renowned consultancy firms of national and international stature, will make this Conference a very successful and memorable one in the history of HSSS Conferences. Who should attend?

- \* Academics: Communicate your research results with colleagues around the world.
- \* Consultants: Present the power of systems thinking, modeling and simulation in your applied, client-oriented work.
- \* Practitioners: Show modeling and simulation at work in your organizations.
- \* Graduate students: Share your developing research in a constructive environment.
- \* Undergraduate students: Have a good experience within a challenging and professional environment.

Kalamata is the capital and the main port of the Messenia regional unit. Its economy is also supported by manufacturing, trade, services and tourism.

Kalamata is an ideal place for bringing together colleagues from all over the world to promote and exchange ideas, knowledge and experience for the benefit of both organizations and enterprises in effectively meeting the needs of a challenging international community.

### Chair of the Organizing Committee

Mr. Aris-Rallis Antoniadis  
University of Piraeus,  
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### Chair of the Scientific Committee

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### HSSS President

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University of Piraeus

## Acknowledgements

*The Board of Directors of the  
Hellenic Society for Systemic Studies  
&  
the Organizing Committee of the  
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would like to thank  
all those who have contributed to  
ensure the conference come to success;  
reviewers, presenters, authors, sponsors,  
support team and other conference assistants.*

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## Brief Program

### Friday 14th September, 2018

- 09:00 – 18:00 Registrations Open
- 10:30 – 12:30 Opening Ceremony with Keynote Addresses
- 12:30 – 14:00 Welcome Reception
- 14:00 – 15:30 Workshops & Parallel Session
- 15:30 – 16:00 Coffee Break
- 16:00 – 17:30 Workshops
- 17:30 – 18:00 Coffee Break
- 18:00 – 19:30 Professional Panel, Workshop & Parallel Sessions

### Saturday 15th September, 2018



- 10:30 – 15:00 Registrations Open
- 10:30 – 12:00 Workshops & Parallel Session
- 12:00 – 12:30 Coffee Break
- 12:30 – 14:00 Keynote Addresses & Parallel Sessions
- 14:00 – 15:00 Light Lunch
- 15:00 – 16:30 Workshops & Parallel Session
- 16:30 – 17:00 Coffee Break
- 17:00 – 18:30 Professional Round Table
- 18:30 – 18:45 Closing of the Conference
- 20:30 – 02:30 Gala Conference Dinner with dance





## Program Timetable

### Friday 14th September, 2018

09:30 – 18:00	Registrations Open
10:30 – 12:30	Opening Ceremony
	<b>HALL 1 (NAUTILUS)</b> <b>Opening Ceremony with Keynote Address</b> <b>Chair: Mr. Aris-Rallis Antoniadis</b>
	Opening by the Bishop of Messenia Professor Chrysostomos Savvatos
	Salutation by the President of the HSSS, Professor Nikitas Assimakopoulos
	Salutation by members of the Scientific Committee Prof. Vasileios Angelis, Dr. Stergiana Giannakou
	Salutation by the member of the Organizing Committee Mr Panagiotis Papaioannou
	CSAP Certification Projects Awards
<b>KN-1</b>	Sustainable mobility and inclusive development of touristic destinations: a system approach <b>Dr. Carlo Sessa</b>
12:30 – 14:00	Welcome Reception (YIAMAS rest.)
14:00 – 15:30	Workshops
14:00 – 15:30 	<b>HALL 1 (NAUTILUS)</b> <b>Workshop 1: Tourism Trends</b> <b>Chair: Mr. Markos Danas</b>
<b>WS-1.1</b>	A Roadmap for Sustainable Management of Greek Thermal Springs <b>Markos Danas</b>
<b>WS-1.2</b>	Health Tourism and Accessibility <b>George Lazaridis</b>
<b>WS-1.3</b>	Introducing PER.SE.A.S. (PERishable Services Auctioning System) as a systemic tool for the sales and profit optimization of services in the tourism industry <b>Alexis Kainadas, Costas Flocas, Christos Papadakis</b>

<b>14:00 – 15:30</b> 	<b>HALL 2 (VOYAGER - C)</b> <b>Workshop 2: CSAP Program – Systemic Tools for Tourism</b> <i>Chair: Panagiotis Papaioannou</i>
<b>WS-2</b>	
	DCSYM, System Dynamics, Vensim <i>Mr. Panagiotis Papaioannou</i>
	AnyLogic , Viable System Model <i>Mr Aris-Rallis Antoniadis</i>
<b>14:00 – 15:30</b> 	<b>HALL 2 (ROYAL CRUISE - D)</b> <b>Professional Panel: Agile Project Management in Tourism and Travel Industries</b> <i>Chair: Theofanis C. Giotis</i>
<b>PP1</b>	
<b>15:30 – 16:00</b>	Coffee Break (VOYAGER Corridor)
<b>16:00 – 17:30</b>	Parallel Sessions
<b>16:00 – 17:30</b> 	<b>HALL 1 (NAUTILUS)</b> <b>Education, Learning and Creativity</b> <i>Chair: Dimitrios Varsos</i>
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<b>EA-2</b>	Tourism Education in Greece. <i>Dimitra Patsi, Stavros Fasoulas, Ioannis Alexiou</i>
<b>EA-3</b>	Developing personalized tourist guide applications for Greek UNESCO World Heritage Sites. A system dynamics approach. <i>Pelagia Chourdaki</i>
<b>EA-4</b>	A systems approach for the excellence in a modern adult education and training environment. <i>Michail Katsipis</i>
<b>16:00 – 17:30</b> 	<b>HALL 2 (VOYAGER - C)</b> <b>Innovation and Sustainability</b> <i>Chair: Rallis Antoniadis</i>
<b>EA-5</b>	Systemic Thinking and Augmented Reality: Complexity Management in the Tourism Industry. <i>Rallis Antoniadis</i>
<b>EA-6</b>	A Systems Approach to Sustainable Development of Tourism. <i>Victoria Zgouva</i>
<b>EA-7</b>	A System Dynamics Model, to identify the impact of eWoM and Social Media in Tourism. <i>Nikolaos Zoannos</i>
<b>EA-8</b>	University networks support the touristic development: the case of UNIADRION ASSOCIATION. <i>Jenny Pange</i>

<b>16:00 – 17:30</b> 	<b>HALL 2 (ROYAL CRUISE - D)</b> <b>Organizational Development</b> <i>Chair: Georgios Karampatos</i>
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<b>EA-10</b>	Systemic approaches to the simultaneous management of similar construction projects processes. <i>Michalis Bratitsis</i>
<b>EA-11</b>	Systems Structuring in Strategic and Procedural level with DCSYM tool. <i>Lefteris Kakavoulis</i>
<b>EA-12</b>	Costing and Budget in a Touristic Enterprise. <i>Georgios Paikopoulos</i>
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<b>18:00 – 19:30</b>	Parallel Sessions
<b>18:00 – 19:30</b> 	<b>HALL 1 (NAUTILUS)</b> <b>Hospitality and Healthcare Management</b> <i>Chair: Dimitra Patsi</i>
<b>EA-13</b>	Health and Tourism. <i>Stavros Fasoulas, Dimitra Patsi, Ioannis Alexiou</i>
<b>EA-14</b>	Facets of Systems Thinking in Travel Medicine. <i>Charalampos Theocharopoulos</i>
<b>EA-15</b>	Systemic strategy for corporate approach for governance and administration. <i>Ioannis Alexiou</i>
<b>EA-16</b>	Corruption and Bribery: Diagnosis and treatment. <i>Ioannis Drakos</i>
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<b>EA-18</b>	Deming Management Method and its Influence in the U.S. Federal Government. <i>Anastasia Sioutou, Thanos Kriemadis, Alkistis Papaioannou</i>
<b>EA-19</b>	Theory Building: Expanding ANSOFFS Strategic Management Theory and relating it with TQM theory. <i>Thanos Kriemadis</i>
<b>EA-20</b>	Leadership in Sport Business. <i>Alkistis Papaioannou, Thanos Kriemadis, Anastasia Sioutou</i>

## Saturday 15th September, 2018

<b>10:30 – 15:00</b>	<b>Registrations Open</b>
<b>10:30 – 12:00</b>	<b>Workshop &amp; Parallel Sessions</b>
<b>10:30 – 12:00</b> 	<b>HALL 1 (NAUTILUS)</b> <b>Workshop 3 : Health Tourism in Greece</b> <i>Chair: Panagiotis Koutsikos</i>
<b>WS-3.1</b>	Systemics and Health Tourism in Greece: Competition and Advantages <i>Panagiotis Koutsikos</i>
<b>WS-3.2</b>	Health Tourism in Greece, Competition- Advantages <i>Zacharias Kaplanidis</i>
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<b>EA-21</b>	A Systems Approach to Information Security for the Travel and Tourism Industry. <i>Stergiani Giannakou, Dimitrios Varsos, Nikitas Assimakopoulos</i>
<b>EA-22</b>	Domain Driven Design and Soft Systems Methodology for Information Systems in Tourism Industry. <i>Panagiotis Papaioannou</i>
<b>EA-23</b>	A GDPR Compliance Package - The Example of an IT SME. <i>Myrto Ramopoulou</i>
<b>EA-24</b>	Re-organization of the General Secretariat of Information Systems and Administrative Support by following a Systemic Approach involving the implementation of a Quality Management System(ISO 9001:9015). <i>Eleni Koutrouli</i>
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<b>EA-25</b>	Systemic approach for the organizational structure and the operation of the Piraeus Bank Group before and after its merger with other banking groups. <i>Olga Tsilimigra</i>
<b>EA-26</b>	Travel Insurance <i>Maria Sotiropoulou</i>
<b>EA-27</b>	Financial Analysis through Systemic Methodologies. <i>Theoktisti Ntoumani</i>

<b>EA-28</b>	The impact of mobile business on tourism industry. <b>Maria Oikonomou, Evangelia Kopanaki, Nikolaos Georgopoulos</b>
<b>EA-29</b>	Modeling and Analyzing the Integration of Logistics Operations Management to the Inter-modality Concept of Shipping Transportation: a systemic approach. <b>Sotirios Messinis</b>
<b>12:00 – 12:30</b>	Coffee Break (VOYAGER Corridor)
<b>12:30 – 14:00</b>	Keynote Addresses
<b>12:30 – 14:00</b> 	<b>HALL 1 (NAUTILUS)</b> <b>Organizational Management in Tourism</b> <b>Chair: Dimitris Varsos</b>
<b>KN-2</b>	The Digital Transformation in the Tourism Sector: Some Future Thinking <b>Dr. Afonso Ferreira</b>
<b>KN-3</b>	Engaging citizens and stakeholders from highly touristic European coast cities in Structured Democratic Dialogues to address sustainable development challenges <b>Yiannis Laouris</b>
<b>KN-4</b>	Improving Organizational Effectiveness and Efficiency Through Systemic Roundtable-Leadership and Participatory-Management in Tourist (or Any) Industry – Introducing A Multi-Methodologies Training Curriculum for both Service and Production Sectors <b>Jason Jixuan Hu</b>
<b>14:00 – 15:00</b>	Light Lunch (YIAMAS rest.)
<b>15:00 – 16:30</b> 	Professional Round Table <b>HALL 1 (NAUTILUS)</b>
<b>PRT-1</b>	<b>A Systems Approach to Sustainable Tourism</b> <b>Chair: Dimitrios Varsos</b> <b>Contributors:</b> <ul style="list-style-type: none"> <li>– Dr. Carlo Sessa</li> <li>– Dr. Yiannis Laouris</li> <li>– Afonso Ferreira</li> <li>– Jason Jixuan Hu</li> <li>– John Kalogerakis</li> <li>– Panagiotis Koutsikos</li> <li>– Zacharias Kaplanidis</li> </ul>
<b>16:30 – 17:00</b>	Coffee Break (VOYAGER Corridor)

<b>17:00 – 18:30</b> 	<b>Keynote Address and Closing HALL 1 (NAUTILUS)</b>
<b>KN-5</b>	<b>The Systemic Approach to Anthropocentric Ethical Tourism</b> <i>John Kalogerakis</i>
	<b>Closing of the Conference</b>
<b>20:30 – 02:30</b>	<b>Gala Conference Dinner with dance EFZIN rest.</b>
	<b>E-Posters</b> <a href="http://www.conf.hsss.eu">www.conf.hsss.eu</a>
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<b>EKN-2</b>	Education and Tourism: Systemically Extending Case Studies from Past Experiences <i>John Thanopoulos</i>
<b>EP-1</b>	Athonian Management - A New 1000year-Old Management Ethic <i>Theodore Spiliotis</i>
<b>EP-2</b>	The European Union Emission Trading Scheme (EU ETS): empirical evidences from Italian companies. <i>Zeila Occhipinti, Roberto Verona, Simone Lazzini</i>
<b>EP-3</b>	The sharing economy in tourism <i>Maria Georgakalou</i>
<b>EP-4</b>	Facebook/Instagram Marketing and Tourism <i>Dimitris Koryllos</i>



# Scientific Events

## **KN-1**

### **Sustainable mobility and inclusive development of touristic destinations: a system approach**

**Carlo Sessa**

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#### **EXTENDED ABSTRACT**

The intervention will discuss a system approach undertaken in the EU project CIVITAS destinations. CIVITAS is a network of cities dedicated to cleaner, better transport in Europe and beyond. Since it was launched by the European Commission in 2002, the CIVITAS Initiative has tested and implemented over 800 measures and urban transport solutions as part of demonstration projects in more than 80 Living Lab cities Europe-wide. Within CIVITAS, the DESTINATIONS project builds up an integrated approach to address mobility and tourism, testing balanced strategies to face the rising challenges of these two growing sectors and to achieve sustainable development and a better quality of life in Funchal (Portugal), Limassol (Cyprus), Rethymno (Crete), Elba (Italy), Las Palmas de Gran Canaria (Spain) and Valletta (Malta). In the six European touristic sites, DESTINATIONS develops a set of innovative actions in order to implement sustainable transport solutions for tourists and residents alike through innovation and cooperation with all major stakeholders. These solutions aim to improve site accessibility, the cost effectiveness and integration of transport services and to reduce emissions and energy consumption. Sustainable mobility will also support tourism development, the quality of life and environment in the sites, fostering new business and services directly in the transport sector and indirectly in other sectors of the local economy. In DESTINATIONS, sustainable mobility is seen as a key component of the whole destination hospitality experience, for different segments of tourists, old and new residents. It requires to be achieved a systemic approach, taking care of integrating different stakeholders and citizens perspectives and needs. Another key concept is the integrated planning of mobility and tourism market design, aiming to provide support and an incubation environment for triggering new inclusive and job-friendly businesses in the touristic destination.



## **KN-2**

### **The Digital Transformation in the Tourism Sector: Some Future Thinking**

**Afonso Ferreira**

CNRS

Institut de Recherches en Informatique de Toulouse - IRIT, France

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#### **EXTENDED ABSTRACT**

The Tourism sector of the economy is exposed to a large number of not necessarily related external factors, maybe more than any other sector. The influence of internal disturbances at source or destination, politics, economics, and violence are well understood, once identified. Long term trends, like demographics, globalisation and the rise of the middle class are also studied in their relationship with Tourism. And the consequences of environmental issues, like climate change and social reactions to it, are also starting to be assimilated.

In this talk I'll explore the effects brought by the Digital Revolution, and the corresponding world's digital transformation, onto Tourism. Our Internet-planned journey will take RyanAir's revolutionary business model towards a remote airport, where we'll jump into an Uber car to arrive in our Airbnb destination. While enjoying our time, we'll note that the disruption caused by just these three technological players is immense, eg with touristic cities incapable to plan tourism influx because of the decentralisation of information.

During this presentation we'll also try and address together interesting questions, including the following. What new disruptions to Tourism will digital technologies enable in future? What will be the impact of Artificial Intelligence, Autonomous Cars, Virtual Reality, and even this conference's very own participation model in the Tourism sector? In complement, I hope that the audience will have their own set of questions for joint exploration.

The Tourism sector is a complex system in itself. Its digital transformation will only make matters more difficult to control, even if economically many current inefficiencies are disappearing as we travel.

### **KN-3**

## **Engaging citizens and stakeholders from highly touristic European coast cities in Structured Democratic Dialogues to address sustainable development challenges**

**Yiannis Laouris**

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### **EXTENDED ABSTRACT**

In the context of MARINA (Marine Knowledge Sharing Platform for Federating Responsible Research and Innovation Communities) EC funded project, we are implementing Structured Democratic Dialogues (SDD) in European coast cities that wish to remain attractive for tourists, while at the same time engaging in Responsible Research Innovation to stay clean, sustainable and generally respond to marine related challenges. The SDDs help build lasting partnerships, cultivate joint visions and scenarios and connect societal needs with future expected advances in Science related to marine issues and their impact on the Societal Challenges. Building on the dialogues we create and validate a a networking and knowledge sharing platform for relevant projects, service contracts, marine actors, educational institutions and citizens, to support and enable discussion, mobilization and mutual learning, knowledge exchange and co-production of different communities related with the MARINA key strategic issues. The project will deliver guidelines and good practices for RRI assessment and promote them to CSOs, industry stakeholders, policy and decision makers, research funders, educational institutions. It will also provide recommendations and policy options for RRI relating to marine issues at EU, national and subnational levels. The resulting Influence MAPS from SDDs in Nicosia, Venice, Boulogne sur Mer, Copenhagen, Istanbul, Galway, Nicosia 2nd, Larnaca, Lisbon, Tallinn, and Brussels will be presented and used to draw conclusions of how they could benefit Greek cities.

## **KN-4**

### **Improving Organizational Effectiveness and Efficiency Through Systemic Roundtable-Leadership and Participatory- Management in Tourist (or Any) Industry – Introducing A Multi-Methodologies Training Curriculum for both Service and Production Sectors**

**Jason Jixuan Hu, Ph.D.**

Wenjun Du, M.S.

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Phoenix, USA

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#### **EXTENDED ABSTRACT**

The core of the new paradigm "Second Order Science," i.e. systemic inclusion of the role of observer/participant in any human system being studied, is no more "the expert," but all participants of the system who bring in interests, concerns, beliefs, knowledge and worldviews, in organizational processes - communications, consensus building, strategic and action planning etc. The focus of organizational efforts is shifted from learning "the truth" to building, collectively, the shared vision and optimized consensus among all stakeholders. A good exemplar for this new paradigm is our Roundtable Leadership and Participatory Management Skills Training Curriculum, a 7-year social-organizational-change-experiment conducted inside China - "WINTOP Roundtable Leadership." It introduces ideas and practical skills of improving communication efficacy, consensus-building effectiveness, participatory strategic-planning, action-planning, and continuous-improvement. It is a case of how practical hands-on ideation technologies are used at organizational level as systemic intervention methods to help organizations that perceive a need to change.

The program contains seven 2-day modules, delivered by a team of two trainers to the top and mid-level management personals in half year, one module per month, with group homework in between the modules. Successful results are documented and various learnings about organizational change are introduced. This presentation will cover the basic concepts as well as real-world experiences from our 7-year experimentation testing the effectiveness and efficiency of this curriculum, in a society with strong authoritarian tradition but has wills to change and to adapt to a better future. This presentation will benefit attendees from various sectors – government agencies, NGOs, business owners, researchers and educators, who will find something useful from both the theoretical and the practical contents to be introduced.

## **KN-5**

### **The Systemic Approach to Anthropocentric Ethical Tourism**

**John Kalogerakis**

JMK Corporate Training & Development  
Athens, Greece  
E-mail: [jmk@jmk.gr](mailto:jmk@jmk.gr)

#### **EXTENDED ABSTRACT**

Anthropocentric Ethical Tourism requires a systemic approach in order to effectively cater for the future touristic needs on the new generations. All stakeholders involved, from the tourism professionals and the visitors (tourists ) to the local inhabitants, must project not only the local color and culture or the much needed and rare professionalism by all, but it is imperative that the ETHICAL behavior is endorsed, projected and put forward in every interaction. Most people understand well the importance of the behavior of tourism professionals as part of a sustainable tourism model.

In the systemic approach, other stakeholders such as the local residents are made part of sustaining tourism. The Anthropocentric Ethical Approach CAN & MUST be taught to all involved, going as far back as the school curriculum.

There is also an unquestionable need to use local products for all tourism business and endeavors. It is not a matter of cost but a matter of habit that will eventually become culture ( According to Aristotle ). The final point of the presentation will be an attempt to explain why "Ethics is the currency of the future".

## **WS-1.1**

**Scientific Areas:** Organizational Development & Performance Management,  
Strategic Management

### **A Roadmap for Sustainable Management of Greek Thermal Springs**

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#### **EXTENDED ABSTRACT**

Thermal springs have always played an important role to the local economies of many Greek rural or semi urban areas. Previews decades thousands of visitors were visiting each year the thermal baths and the income inflow to the thermal regions was of great importance for the sustainability of the local communities. The period of decline and depression that followed has revealed the inefficiencies in the legislation, in the existing infrastructures and in the management of these thermal units.

Last three years there has been a shift with the implementation of strategic planning which has resulted in important improvements, but is it enough to address a new era of development in the Greek thermal springs? What steps should be followed for the creation of a strong number of well organized, sustainable enterprises that can offer high level thermal therapeutic services that can be included to the tourist packages of the destinations? Which type of management is needed and how the European knowhow can be implemented in our national thermal tourism concept? This paper is aimed to provide specific answers.

**Keywords:** Thermal tourism, thermal springs, strategic planning, management

## **WS-1.2**

### **Health Tourism and Accessibility**

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#### **EXTENDED ABSTRACT**

I am going to transfer pictures and experiences from my journeys, through personal experiences and to show that other countries and cities create the right conditions and the obvious to be friendly and accessible to every person especially in Tourism.

Sports make it possible for me to struggle and to exercise. But while traveling to the countries and cities I visit, I collect pictures and experiences.

### **WS-1.3**

**Scientific Areas:** Hospitality Management & Event Planning, Strategic Management

#### **INTRODUCING PER.SE.A.S. (PERishable Services Auctioning System) AS A SYSTEMIC TOOL FOR THE SALES & PROFIT OPTIMIZATION OF SERVICES IN THE TOURISM INDUSTRY**

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#### **EXTENDED ABSTRACT**

The challenging issue:

Perishable services such as hotel accommodation, airline reservations, or cargo capacity, can be sold only until their time of peril, i.e. the night of the actual hotel stay (for vacant rooms), a flight's departure time (for empty seats) or the sail of a freight vessel (for available cargo space).

Until that expiration deadline occurs, the sales departments of these service providers must exhaust all their efforts to either:

- A) Maximize the volume sold of their available inventory, OR
- B) Optimize the revenue to be collected from the expressed market demand at any given time.

While statistical analysis of historical demand data and sales volume can provide valuable information for prediction estimates, there is no mechanism invented yet to gauge confirmed demand for such services in real time, nor any system exists to provide this sort of constantly evolving business intelligence to a decision-making process or tool.

The tourist system:

In the wide tourism sector, many services have an expiration date and time. On expiration, the owner of the expired service inventory either profits from the value of the volume sold or accumulates losses on unsold inventory, including its opportunity cost. This profit-loss notion, may cause system entropy either through excess offer or overpriced/under-priced services, within a specific time period and unbalanced subsystems which may lead to various reactions; usually unstable conditions create a negative impact on the subsystems, which are either obliged to adapt to new circumstances or collapse ending their entire existence. In the hotel industry, profit is an important parameter for systemic survival. Accurately measuring and efficiently managing demand is the main purpose of this study.

The PER.SE.A.S. Solution (PERishable SERVICES Auctioning System):

The studied solution and concept to effectively deal with the void in managing perishable services, is an approach for further study and development and is based on the ambition of creating a technology – "The Tool". This tool will capture and exploit critical business intelligence, hidden in completed online sales transactions, also enabling other sales management choices, while constantly and

dynamically optimizing sales volume and/or revenue, through the use of sophisticated online auctions of such perishable services.

By continuous real time information collection and readjustment of key auction characteristics, namely a) the starting price of an auction, b) an auction's duration, c) the starting time of an auction (with respect to the distance to time of expiration - peril) and d) the remaining volume of unsold capacity due to expire, the demand for any service can be used to increase significantly gains in either sales volume or yield optimization of services, in benefit of any profit-oriented organization.

The constantly added value to a perishable service before its expiration, along with the innovative approach of the proposed tool, is a feature missing from the existing sales channels of such services today, enabling strategic choices and decisions to both sellers and buyers, BUT also providing valuable information on "lost" value of unsold services, giving critical insight for elaborating strategies to redefine the next generation of services.

**Keywords:** Perishable, Services, Hotel, Management, Auctions, Strategy



## **WS-2**

### **CSAP Program – Systemic Tools for Tourism**

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#### **EXTENDED ABSTRACT**

In this three-part workshop we will present two systemic tools/methodologies each one providing a purpose specific modeling approach.

The first one concerns the Design and Control Systemic Methodology (DCSYM) and the latest developments on it. DCSYM and the accompanying software (DCSYM CASE TOOL) constitute a language for designing systems and enabling the collaboration between the interested parties. DCSYM is not purpose-specific; instead it can be used to a wide range of problems on the basis of systems approach. The application field includes enterprise and organizational modeling, business process mapping as well as general systems design and intervention.

The second one is about System Dynamics using the “Vensim”™ software. System dynamics is a technique for studying complex systems whose main characteristic is the large number of interacting factors and the domination of feedback loops. These systems tend to be “dynamic” in the sense of changing their behavior over time. According to the System Dynamics approach, the structure causes the behavior and the behavior produces the events we observe. The most effective intervention is the one that starts by changing the structure. System Dynamics is a computer-aided approach and “Vensim”™ is a widely used software which implements it. It allows modeling and real-time simulation of complex systems, thus providing a means to policy analysis and design. The application field includes complex social, managerial, economic, ecological or any dynamic systems.

In the third part, Aris Antoniadis presents AnyLogiC™ which is an advanced modeling and simulation software which supports and combines three major methodologies used to build dynamic business simulation models: System Dynamics, Discrete Event Modeling, and Agent Based Modeling. The idea of multimethod modeling is to integrate different methods of modeling and simulation to overcome the drawbacks of individual approaches and get the most from each one. Combining different methods leads to efficient and manageable models without using workarounds. AnyLogic supports all three major methodologies and the modeler is never limited by a single modeling method since he can choose the most efficient one, or even a combination of any of them, and get the best modeling and simulation to address the problem at hand.

**Keywords:** DCSYM, System Dynamics, Modeling, Simulation

## **WS-3.1**

### **Systemics and Health Tourism in Greece: Competition and Advantages**

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#### **EXTENDED ABSTRACT**

Firstly, I would like to inform you that the Health Tourism consists of 8 fields, which are the following:

1. Medical Tourism
2. Dental Tourism
3. Spa Tourism
4. Wellness Tourism
5. Sports Tourism
6. Culinary Tourism
7. Assisted Fertilization Tourism
8. Assisted Living Tourism

Greece is able to offer all of the above mentioned ways of Health Tourism. The sun, the sea, the Mediterranean climate, the big amount of thermal springs, the medical staff of hospitals and private clinics, are few of the advantages that the tourist and the patient in our country is able to enjoy.

Greece nowadays, thanks to the high level of education, training, professionalism and ethics, as well as the Greek Physicians, are known internationally and are among the best of the world, along with experienced nursing and support personnel about the high qualities that are able to offer.

Greece is absolutely competitive in quality services and competitive prices level in combination with excellent infrastructure and technology, for example about its Thermal Springs and Spas.

Greece is also famous for its cuisine, which is unique for its use of materials coming from the rich land full of flavors, growing under the Mediterranean sun and combined with the salt of the sea.

Also, all of Greece is an outdoor museum as well as a modern country with a very busy life, pleasure, delicious delights, magnificent sites and people! For years Greek islands have been top travel destinations, internationally.

## **WS-3.2**

**Scientific Areas:** Marketing, Strategic Management

### **Health Tourism in Greece, Competition- Advantages**

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#### **EXTENDED ABSTRACT**

In order to get a more complete idea of the advantages and disadvantages of our country in the course of development of health tourism, we are obliged to approach carefully the international market and the environment. We have to fully understand the reasons that people move from one country to another searching for health services, combining at the same time tourism services. We also have to examine the most successful destinations so far and the main reasons which made these destinations so attractive to so many visitors. In the course of our examination we have to understand the role of the central governments, public institutions, local authorities and private companies. No doubt the successful journey to the development of health tourism, the role of the macroeconomics and the microeconomic keys are absolutely important. Greece, as a new player, starts with several comparative advantages as well as disadvantages. As main advantages we can refer to our history, Hippocrates case and theory, the level of our modern medicine, the high number of health practitioners versus our total population, climatic conditions, quality and importance of the Mediterranean diet, good touristic infrastructure and in many cases competitive cost, regarding health services and touristic services. As main disadvantages we can underline that Greece is not very well-known health destination in the international market, very few hospitals and health centers provide the needed quality and quantity of medical services, very few of them are certified with international certifications of quality and of course we have an uncompleted knowledge of the successful marketing tools and strategy policies. In this presentation we will try to approach all these factors that governmental and non-governmental entities are obliged to search carefully and conclude with a package of measures that will be considered as necessary and successful for the target in question. No doubt that this is not at all an easy task but it is more than obvious that the whole idea of making Greece a dynamic and successful health destination country, it is not easy in any case. Competition is really strong, mature destinations are already established, clients are well informed and very demanded and long financial crisis in Greece has diminished visions and infrastructure.

**Keywords:** Marketing Macroeconomic Microeconomic Advantages- Disadvantages Competition

## **PP-1**

### **Agile Project Management in Tourism and Travel Industries**

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#### **EXTENDED ABSTRACT**

Software is eating the world and changes the way we do business. Projects deliver changes and implement strategies in all business sectors. But many project fail. Traditional or waterfall project management results in many failed projects. Traditional project management cannot easily deal with changing requirements and usually don't deliver projects on-scope, on-time, on-budget and within predefined quality.

In Tourism and Travel industries, requirements change frequently during any project implementation (software development, tours, events, etc). Agile project management methods (Lean, Kanban, Scrum, etc.) have emerged as an alternative way to run projects compared with traditional project management methodologies.

Project size, project duration, technology issues and human interaction and intervention enhance complexity in Tourism and Travel industries. Complexity increases primarily by the number of active interconnected components, especially agents, which exhibit interconnectedness, recursiveness, uncertainty, and instability.

According to PMI's latest publication on Complexity from a project/program perspective (PMI, 2014), three categories (groups of causes) of complexity may be encountered in projects and programs:

- Human Behaviour (Individual Behaviour, Group Behaviour [organizational/social/political], Communication & Control and Organizational Design & Development)
- System Behaviour (Connectedness, Dependency and System Dynamics)
- Ambiguity (Uncertainty and Emergence)

Agile project management in Tourism and Travel industries can handle complexity more effectively in order to deliver more successful projects in iterative and incremental ways engaging the stakeholders all the time.

**Keywords:** Agile, Project Management, Tourism

## **PRT-1**

### **A Systems Approach to Sustainable Tourism**

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#### **EXTENDED ABSTRACT**

Greece is expected to host 32 million foreign travelers in 2018, over five times the number of travelers hosted in 2008. The total contribution of travel and tourism to GDP (including wider effects from investment, the supply chain and induced income impacts) was EUR 35.0bn in 2017 (19.7% of GDP) and is expected to grow by 5.3% to EUR 36.9bn (20.2% of GDP) in 2018. The strain to maintain the delicate balance between "sustainable tourism" and "overtourism", has not gone unnoticed. Overtourism is a result of focusing almost exclusively on growth, with little or no concern for the impacts. A report published by the World Travel and Tourism Council acknowledges five key consequences of overtourism: (1) alienated local residents, (2) degraded tourist experiences, (3) overloaded infrastructure, (4) damage to nature, and (5) threats to culture and heritage. A key contributor to achieving sustainable tourism is to adapt a holistic approach through a comprehensive national policy that mitigates coordination disconnects between the different government ministries, departments and agencies involved. These disconnects often result in conflicting policy decisions and a lack of coherence in terms of travel and tourism governance that frequently exacerbate rather than alleviate overtourism. A system is said to exist when a set of interconnected elements interact in such a manner that their input-output relationships constitute the operational utility within the overall purpose or defining function of the whole. Indeed, the national travel and tourism policy should promote a systemic cohesion that is made possible through open communication networks and multidirectional information sharing, thus encouraging a sense of collective acumen that propagates growth while alleviating the impacts of this growth over time. On a government level, the different actors need to be continually responsive to the various (regional, national, and international) social-cultural, legal and regulatory, economic, political, environmental, ethical, demographic, and technological factors that influence the country's capacity to effectively implement its national travel and tourism policy, and to stimulate private sector investment that supports the increase in demand. Responsiveness to changing conditions is an essential characteristic of sustainable tourism. Responsiveness implies: (1) proactive changes in the nation's short, medium, or long-term policy; (2) refinement of the sociotechnical infrastructure that supports the implementation of this policy; (3) modification of practices that are adapted as a means to achieve policy; or (4) any combination of the above.

# Extended Abstracts

## **EA-1**

**Scientific Areas:** Education & Learning, Social Approaches

### **DYNAMICS OF DECISION – MAKING AND CHOICE IN A MULTIFACETED ACADEMIC CONTEXT: A RISK BASED APPROACH**

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#### **EXTENDED ABSTRACT**

As the world becomes increasingly interconnected, it has become progressively more challenging for students and young adults to correctly anticipate the consequences of their decisions and the effectiveness their decision-making processes, over the long-run. The multifaceted interactions between the various social-cultural factors that impact their decisions result in a dynamic complexity that gives rise to emerging conditions, which are neither intuitive nor linear. Moreover, the academic systems that prepare students with the skills required to navigate their transition from adolescence to adulthood are often subject to ambiguous events and constraints, which are a product of rapid advances in scientific understanding, the increasing complexity of problems addressed by communities and societies, changing technologies, and shifting demographics resulting from population mobility. In fact, in this context, students are currently being prepared to face a world that does not yet exist, in which they will use technologies that have not yet been invented, in order to solve problems that are not yet recognized as problems.

In this environment of unprecedented uncertainty students are frequently overwhelmed with options and possibilities (that often have lasting ramifications) relating to issues that include school selection and career goals, academics and time management, and social interactions in school and social groups. The effect of this uncertainty is "risk". Thus, risk may be defined as "the (adverse or beneficial) effect of uncertainty on an individual's ability to achieve his or her goals and aspirations (objectives)". In addition to linking risk to objectives, this definition treats risk as a potential opportunity that may lead to positive benefits. All decisions associated with options and possibilities involve risk. Risk can be managed by identifying it, understanding it, and then evaluating whether the risk should be accepted or modified through appropriate treatment. Further, students must be mindful of the overall consequences of their decisions, recognizing that current action may yield short-term benefits but long-term difficulties, or the inverse.

This work will apply a risk management model that is based on a systems approach to decisions that are traditionally required of students and young adults. The approach places emphasis on the underlying structures of the issues

associated with these decisions. The model treats risk as a measure of the extent to which an individual is impacted by a potential circumstance or event, which is typically a function of the adverse or beneficial impact that would arise if the circumstance or event occurs, the likelihood of occurrence, and the likelihood of detection. The risk management model includes: framing the risk, assessing the risk, and, finally, responding to the risk. Throughout this structured process, the consequences resulting from decisions taken are monitored and reviewed in order to ensure that no further risk treatment is required.

**Keywords:** Student decision making, risk management



## **EA-2**

**Scientific Areas:** Education & Learning,

### **Tourism Education in Greece**

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#### **EXTENDED ABSTRACT**

This paper examines issues regarding the scientific and academic character of Tourism focusing in the situation in Greece during last years. The aim of this paper is to approach theoretically the procedure of tourism education in Greece in comparison to other countries in order to prove the importance of this field in society, the economy of the country as well as in other sectors.

One of the main sectors of the Greek economy, but also the economy of many countries around the world is certainly tourism, since is contributing significantly to the development of the country, offer business opportunities and provide opportunities for employment. The success in this sector is depending on the quality and the kind of services to clients – tourists. Tourism in our country gives us constantly challenges to the provided services and the needs either change or grow and should be faced and remedied.

What is the strategy of Greece in order to maintain a high level of education in the tourism product in order to maintain a high level of service and what is the strategy to adopt new services? This question is being replied in this paper.

Initially, a reference is made to the tourist environment and the approach of the educational identity in Greece is general. In addition, we refer to the formation of strategy for the tourism education while then we are mentioning the tourism education in other European countries as well as in the USA. Last but not least other ways of education in tourism sector are described.

From the above and with the use of systemic methodology DCSYM, in order to have a better understanding and charting the problems that exist in the tourism education to pinpoint. Concluding as soon as we find the issues in the process, we propose solutions to improve the situation.

**Keywords:** Tourism, education, tourist education

## **EA-3**

**Scientific Areas:** Creativity & Innovation, Strategic Management

### **Developing personalized tourist guide applications for Greek UNESCO World Heritage Sites. A system dynamics approach.**

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#### **EXTENDED ABSTRACT**

In 1972 the General Conference of UNESCO adopted the World Heritage Convention Concerning the Protection of the World Cultural and Natural Heritage, one of UNESCO's emblematic instruments. Until September 2018, 1092 properties in 167 States is listed by UNESCO as World Heritage Sites aiming at the "identification, protection, conservation, presentation and transmission to future generations" their outstanding universal value. Until today, in Greece 18 properties have been inscribed on the UNESCO World Heritage List (16 cultural and 2 mixed cultural and natural).

In Parallel, digital realities combined with information and communication technologies offer important opportunities in the development of strategic dynamic marketing providing a range of e-tourism related services and experiences to the potential visitors of the outstanding universe value UNESCO World Heritage Sites in five areas: access, better, connect, dis-intermediate and educate. The growing field of e-tourism is linked to the increasing worldwide diffusion of smartphones and related mobile applications

The tourism industry needs new platforms through which access to a set of easy-to-use authoring tools that facilitate the creation and maintenance of personalized cultural travel guides in the form of mobile apps would be offered to the visitors of Greek UNESCO World Heritage Sites.

In this framework, this paper focuses on the design, implementation and evaluation of a tourism guide authoring platform which offers the chance to a non-experienced user to create easily in a few minutes a tourist guide app for a Greek UNESCO World Heritage Site with articles, routes, mini-games, augmented reality content as well as general tourism information and services related to tourism industry using only drag and drop features.

System dynamics has the ability to capture the dynamic behavior of a complex system over time. The authoring platform, the apps matches the users' profiles and the tourism industry can be considered as a complex system. The goal of this paper is to assess the system dynamics modeling in planning and development of the tourism industry.

**Keywords:** personalized tourist guide application, system dynamics, cultural tourism, UNESCO World Heritage Sit

## **EA-4**

**Scientific Areas:** Education & Learning,

### **A SYSTEMS APPROACH FOR THE EXCELLENCE IN A MODERN ADULT EDUCATION AND TRAINING**

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#### **EXTENDED ABSTRACT**

In the present study an effort is made to present THE ANALYSIS OF THE A SYSTEMS APPROACH FOR THE EXCELLENCE IN A MODERN ADULT EDUCATION AND TRAINING, which consists of many qualitative and quantitative interdependent key variables.

**Keywords:** EXCELLENCE, ADULT EDUCATION, TRAINING, ADULT

## **EA-5**

**Scientific Areas:** Creativity & Innovation, sustainability

### **Systemic Thinking and Augmented Reality: Complexity Management in the Tourism Industry.**

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#### **EXTENDED ABSTRACT**

The global economic environment is full of challenges stemming mainly from the wealth accumulated in the developing markets, which, together with the rise of the middle class, are going to direct the consumption of the future with obvious consequences for tourism as well.

Tourism is a sector that is showing significant growth and is expected to continue to grow rapidly and is the key to a country's economy. Its contribution to the economy is much greater than that of other sectors in most countries, so it is one of the best elements of the trade balance.

The tourism industry is a highly competitive business that requires governmental, public and non-governmental involvement to ensure its success. The variety of those involved in the tourist industry (Tourists, Travel / Tourism Offices, Professionals and Consultants, Residents of Regions, NGOs, Lodgings, Museums, Libraries, Monuments, Archaeological Sites, Municipalities / Post Offices, Banks) and the need for harmonious cooperation with each other for the successful outcome of tourism, requires the complex management of complexity, which emerges from the diversity of the actors involved.

Augmented Reality (AR) is a visualization technique that superimposes computer generated data on top of the real-world view, as captured from the camera of a computer, a mobile phone or other devices. AR can augment and enhance the user's perception of reality and of the surrounding environment while information becomes interactive and easily manipulated in a digital manner.

AR, among other sectors, is also used in the tourism sector to improve the tourist experience. AR information systems are able to personalize the delivery of multimedia content according to user characteristics and user context, thus supporting their development for various scenarios by acting as variety attenuators and helping to manage complexity. Besides, in the tourism industry emerges the need for integrated, dynamic, technology-based added value services that are user-friendly offering interactivity and entertainment.

The systems approach provides alternatives to complex structures and procedures that offer another perspective to complex problems. The adoption of System Thinking methodologies which deal best with both soft systems (such as stakeholders' opinions, etc.) and hard systems (such as quantitative evaluations, metrics for success, etc.) was therefore deemed necessary.

The present work explains the Augmented Reality technology, its benefits to those involved in the tourism industry as well as the benefits that may arise from the synergy of the stakeholders for the society in general. The existing tourist

platforms and the features they support are briefly presented. For a better users' targeting, various ways of tourists' categorization are explained. Using systemic thinking, it is explained how Augmented Reality platforms and their smartphone applications can serve as variety attenuators for the stakeholders in the tourism industry. Using Systemic Tools in Complexity Management, a simulation model is described, which presents the behavior of user categories, depending on the characteristics of their tourism application and their profile, which can be used as an additional variety attenuator for the stakeholders.

**Keywords:** Augmented Reality, Tourism, Complexity, Management, Variety

## **EA-6**

**Scientific Areas:** Environmental Systems, sustainability

### **A Systems Approach to Sustainable Development of Tourism**

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#### **EXTENDED ABSTRACT**

Tourism is a strategic national key sector which continues its rapid growth, despite the recent global financial crisis that prompted an economic downturn and a debt crisis in Europe and by extension in Greece. In fact, according to recent data, the Greek tourism industry has proved to be one of the main key sectors of the Greek economy, which was less affected by the financial systemic crisis.

The Tourism industry is an open dynamic system with many different stakeholders and with multiple environmental, economic, and socio-cultural impacts on the places and people that participate in it. Its main mission is to address the needs of visitors, the industry and the environment and host communities. Despite the flexible dynamic character of the tourism industry, the balance between the structural elements of the tourism system is strongly dependent on the fragile relationship between tourism and environment.

Loss of the natural beauty of tourism locations makes tourism destinations less attractive. All stakeholders should constantly take into account that the large consumption of the global environment will inevitably lead to a reduction of the already scarce natural resources. Sustainable tourism cannot be attained, if there is depletion of valuable natural resources, production of large amounts of waste, air and water pollution and negative effects on wildlife and vegetation.

Quality in tourism services is a continuous process and a significant factor for the economic viability and the competitiveness of tourism industry. The desirable quality and improvement of the environmental performance in the tourism sector are inextricably linked to the sustainable environmental management. Tourism sustainability calls for specific measures to be taken; Strong political leadership and strategic environmental management, innovative system interventions and appropriate environmental policies, a sound financial management of Community Funds and successful private and public-sector partnerships are some of the measures, which will ensure organizational excellence in tourism sector.

To conclude the tourism sector is a dynamic complex system of interrelated environmental, economic, and socio-cultural elements, which are interacting with each other. This highlights the significant role of System Thinking Methodologies, whose application in tourism industry is critical in order to achieve a holistic understanding of the causal relationship between tourism and environment. System Thinking has proved to be an effective tool for clarifying and resolving the disorders in systems as well as specifying the necessary requirements for managing system complexity and achieving the desirable outcomes. A systems approach to the sustainable development of tourism is aligned with the basic definition of Quality, which is "conformance to requirements and fitness for purpose".

**Keywords:** Tourism Sustainability, Quality, Strategic Environmental Management

## **EA-7**

**Scientific Areas:** Marketing, Tourism

### **A System Dynamics Model, to identify the impact of eWoM and Social Media in Tourism**

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#### **EXTENDED ABSTRACT**

Greece constitutes a tourist destination, not only because it has a wealthy History (Parthenon, Macedonia, Greek Ancient Mythology, 1st Olympic Games etc), but also due to her Geopolitical Position. The Greek islands, the Aegean and the Ionian Sea can offer comfortable and luxurious vacations. Tourism is the most important deployment factor for the Greek Economy and at the same time it creates new working positions, fact that could help the decrease of unemployment.

There are a lot of ways that a potential visitor can be informed about the tourist attractions, like museums, ancient theatres, ancient castles, worldwide known restaurants, beaches etc. The purpose of Tourist Guides is just to inform the potential visitors, but what about to convince them?

The Internet and Social Media can be used to manipulate the human thinking process in order to arouse the need of visiting a tourist attraction. The last 15 years there have been a lot of researches about the impact of Social Media on a tourist destination choice, but only during the past 8-9 years we are actually studying the impact of electronic world-of-mouth (eWoM) on Tourism Management.

The model that we have developed simulates: 1) the way that Social Media and the Internet affect tourists' behavioral intention to choose a destination and 2) the influence of eWoM on destination trust and intention to travel. The combination of those two (eWoM & Social Media) can be used to manipulate the future visitors' way of thinking (Theory of Planned Behavior - TPB), so as to draw their attention to Greek tourist attractions.

Therefore, this study could help to identify other variables that should be considered in the Strategic and Business Plan of companies which operate on Greek Tourism.

**Keywords:** System Dynamics, eWoM, Social Media, Tourism

## **EA-8**

**Scientific Areas:** Education & Learning, Sustainability

### **University networks support the touristic development: the case of UNIADRION ASSOCIATION**

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#### **EXTENDED ABSTRACT**

The touristic development of an area is an important factor for the subsequent economic development of the whole country. Additionally, cross-border cooperation in the field of tourism may minimize the environmental damages and upgrades the social and economic status of all countries involved. In order to promote sustainable touristic development, it is necessary to organize a cross-border cooperation, continuing education programs, and seminars or workshops on tourism. So, universities which are committed to support and work on these educational initiatives for social development can contribute a lot to the touristic innovative practices.

Additionally, university networks can also support these initiatives to uphold sustainable tourism. Amongst these university networks and associations, UNIADRION is an association which aims to create a permanent connection of universities in the Adriatic-Ionian area and contributes to the implementation of the EUSAIR initiatives in this area. UNIADRION declares that 'The purpose of UniAdrion is the collaboration between universities and research centers with the aim of strengthening international cooperation and of favoring the progress of culture, science, training, and research in the countries of the Adriatic-Ionian basin. The association comprises about 40 members located in the following countries: Albania, Bosnia-Herzegovina, Croatia, Greece, Italy, Montenegro, Serbia, Slovenia', (<http://www.uniadrion.net/?q=organization>).

According to other UNIADRION statement, the sustainable tourism is one of its main priorities within the Adriatic-Ionian area and, "promotes scientific-academic cooperation mainly through the implementation of teaching and research initiatives, such as training courses, post-graduate diplomas, summer schools, joint research projects. The cooperation is focused on different topics, coherent with the pillars of the EU Strategy for the Adriatic-Ionian Region (EUSAIR): blue growth, connecting the region, environmental quality, sustainable tourism and cultural heritage, societal challenges, economic and policy analysis.", (<http://www.uniadrion.net/?q=organization>).

In conclusion, a strong university cooperation is vital to upkeep tourism and ecotourism in order to exchange know-how, support common educational programs and engage local communities or countries in the touristic development.



## **EA-9**

**Scientific Areas:** Operations Management ,

### **Design and implementation of a Smart Sustainable Control System in retail stores**

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The sustainable business model of the company is a continuous cycle that shows how its brands create value for all stakeholders. This means that each brand works to find savings in order to invest and grow. The model guides these local strategies, allows the company to continuously invest in fresh, healthy, affordable products and services. The three success factors of the strategy is to save for its customers, to fund growth in key channels and also to invest in its customer proposition.

In order each retail store to operate smarter, efficient with less waste and friendly environment for the customer it is necessary to install a new innovative system for the control of all loads. Every store has to be aesthetic, functional and sustainable.

However, operationand maintenance cost reduction is two important drivers and motivators for a super market. On the other hand, it is necessary to offer an friendly and comfortable environment to the customers. All buildings require some form of energy to operate.

In particular, the need for more sustainable or green buildings puts pressure on the operating and capital budgets since most improvements require some amount of capital investment. In order to decide for the implementation of efficient improvements it is necessary to have a reliable Control system, which is going to give us reliable data in real time.

Using the DCSYM and the VSM tools we will analyze the current situation of the operation procedure in the super markets, we will show the communication flow between the equipment, HVAC system, refrigerators and lights with the customers and the personnel as well as the internal and external environment. The results of the DCSYM Methodology will help us to design an intelligent and efficient control system.

Moreover, it is necessary, to design and install an efficient control system, which will take into account all parameters and the interaction of the environment which are the main drivers for the Energy Consumption in stores, such as external temperature, occupancy, customer needs. They always give consideration to supplying the most efficient use of available resources, space, customers, requirements and safety for the stores.

During the structure phase of a process oriented control system it is necessary to describe all steps of processes (leading processes, core processes and support processes). Using the Viable System Model of Stafford Beer we will analyze the

influence between all steps of this system. We will design an organization structure and a role model for tasks, competence and responsibility.

To sum up, in order to design and install a smart and sustainable control system in a dynamic environment it is necessary to analyze the various elements of this system as well as the interaction between them. The strategic plan process has to be based on Real-Time Information. The structure of the process has to be designed in such a way that it will be not influenced by a problem. This means that the process has a start and an end every time we try to run through it. It has to be guaranteed that every step of the process can be used flexible independent of a problem.

**Keywords:** DCSYM, VSM-Model, Real-Time Control, Sustainability, Retail

## **EA-10**

**Scientific Areas:** Organizational Behaviour, Project Management

### **Systemic approaches to the simultaneous management of similar construction projects processes**

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#### **EXTENDED ABSTRACT**

Managing a project is a process that has difficulties but at the same time there is a knowledge of how it is executed. Various known management techniques can be applied to a number of projects.

At the same time managing more than one project for an organization is certainly a more complex process, which needs more resources. It should obviously be done according to the function and policy of the organization, and be included in the general procedures that are being applied. But what if we have more than one similar project or in the case of a big project that is made up of many smaller similar projects? Is there a possibility to improve a company's performance and profitability, which undertakes to complete such projects? In this case, we will look at the construction of a project that essentially consists of more than one independent, but similar works, in different regions and with different characteristics. The project as a whole is very special with strict time schedules and quality control procedures.

We will try using systemic methodologies to apply a more holistic approach to the implementation of these projects, of course with a view to better integrating them with multiple benefits for the enterprise, both in terms of resources and quality. For that a change in the strategic planning of the organization and a holistic approach of the complexity of the project will allow this company to reengineer all the procedures. The purpose of the analysis is to redesign business operation aiming at maximizing its performance in terms of project quality and profit income.

The first step is to study the existing situation of the company using different systemic methodologies such as Design and Control SYstemic Methodology (DCSYM), Viable Systems Model (VSM) as well as other systemic tools. Improvement of the existing situation is being proposed in order to achieve an optimal operational structure. A new design of the company operations is being described after the improvement proposals using the Systemic Methodologies. The results of the above proposals are very clearly showed through the analysis, where we can see the new and more structured way of the operation and control between the departments of the company, which is leading to resources saving and quality assurance. Conclusions for the appliance of the above optimization proposals are being presented.

**Keywords:** project management, systemic approaches, system dynamics

## **EA-11**

**Scientific Areas:** Business Continuity, Business Process Modelling

### **Systems Structuring in Strategic and Procedural level with DCSYM tool**

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Decision support systems are nowadays more and more deployed. In our presentation we adopt the Design and Control Systemic Methodology (DCSYM), to analyze the structure and functionality by examining the communication and interaction within its elements.

DCSYM has the ability to subtract the structural elements of a system, that is to integrate them in a hierarchy with the bottom-up approach and results in the visualization of the structure and function of the system. Depicts in detail their systems and subsystems, the individuals, as well as the qualitative interactions between them, namely the channel, the direction, and the type of communication between them and also introducing the concept of control.

Our case study is a small Media company active in the field of Agro-Tourism and outdoor activities. Primarily we describe the Current State (C.S.) of the Problem (P.), and then we generate a visual representation of it using DCSYM. Furthermore, we present thoughts about the use of DCSYM in conjunction with the C.S. diagram. Finally we present general conclusions, and thoughts about the use of the DCSYM's methodology, and consequently we describe the Recommended Improvements (R.I.), which are about redefining the elements of the company, the roles of the personnel as well as the structure of the communication channels. After the application of the R.I., the new structure is been redesigned using DSCYM.

**Keywords:** Agro-Turism,communication,methodology,structure,system,function

## **EA-12**

**Scientific Areas:** Operations Management , Organizational Development & Performance Management

### **Costing and Budget in a Touristic Enterprise**

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#### **EXTENDED ABSTRACT**

In this paper we shall present the value of budgeting and costing applications which is invaluable for the positive direction of the business and the increase in market share.

I. For the costing we shall concentrate on:

- cost-benefit analysis of project-service-projects from direct labor and indirect labor, other expenses, materials use, distribution costs and unused capacity determination.
- customer-to-customer performance and product-by-product performance.
- an estimate of the cost of a product by product in order to determine the corresponding production level and the correct pricing policy.

II. For the budget we shall refer to Customer and Unit (Supportive, Productive, etc) as well as to be based on:

- Monitoring on an annual basis through deviations from previous periods - rates of change and in relation to the business plan.
- On the budget report of the magnitudes of the activity carried out by applying revisions where this is required.
- Provision for a seasonal period through quantitative and qualitative breakdowns of the services provided and the corresponding expenditure-revenue.
- Provisioning on requirements per workforce in human resources.
- Preview the cost of investment and complementary projects.
- Professional audit and development reports by way of explanatory statements.

Finally, two short applications will be presented on the corporate log of the business and the tool of increasing the quality of attraction and service to the customers of the financial unit and will deal with a touristic enterprise.

**Keywords:** Budget, Costing, Business Plan, MIS

## **EA-13**

**Scientific Areas:** Hospitality Management & Event Planning, Sociocultural Impact

### **Health and Tourism**

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### **EXTENDED ABSTRACT**

Tourism is an industry and together with the shipping, are the main supporting pillars of the Greek economy. Tourism is apart from the cornerstone an extrovert national product which continuously year-on-year increases in inputs, yields big benefits because of trading activity becomes "intramural" and employs a large proportion of the working population.

When the tourism sector connects with other critical and vital area of health, then you really can see the quintessence of satisfaction in terms of needs coverage. The bet, if you can say it in this way, is to ensure an harmonic relationship and that a proper management is done among the benefits where people make up the key role, those who tireless and strong supporters where they work at any conditions prevail throughout the geographical region of our country and highlight their zeal and spread the principles of our history. The benefits that our country obtains are related to both the local society and to the consolidation of international public opinion that Greece is a country in which besides the age-old culture, you can enjoy health services combined with rest, peace, relaxation and well-being.

Tourism started basically as a recreation but over the years additional types developed, having a greater range of benefits and services and larger audience that buys the provided services. Briefly the following kinds of tourism are mentioned: leisure, tourism, health, sports, Conference etc. Then we will give a brief description for each of them. Our analysis focuses on health tourism. How the tourism affects the local development?

For this purpose, a model is proposed for measuring the impact of tourism in the local development for evaluation of interaction of the tourism cluster, competitiveness and sustainability in the economy, the society and the environment. The proposed model presents a holistic, multidisciplinary and multisectoral concept of local development, which occurs through a systemic approach to the concepts of competitiveness, social equality and sustainability. The emerging results enable the strategic lead which the involved employees are required to apply who are responsible for tourism policies of the public sector, as well as strategies for competitiveness, cooperation and sustainability into private companies and foundations.

**Keywords:** medical tourism, health tourism, systemic model

## **EA-14**

**Scientific Areas:** Healthcare Management, Medicine

### **Facets of Systems Thinking in Travel Medicine**

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#### **EXTENDED ABSTRACT**

Travel medicine is a dynamic, interdisciplinary medical sector of growing importance and interest due to globalization, intercontinental and intercultural travelling. Dedicated to the prevention and management of travel-related diseases and health incidents of international travelers, it is of increased complexity compared to regional medicine as it is the meeting point of epidemiology, tourism agencies, public health care delivery, insurance policies and it requires the co-operation between the country of origin and country of destination. International tourist arrivals are on constant increase during the last decades with a recorded 1,235 billion in 2016 which is expected to rocket to 1,8 until 2030, according to the World Tourism Organization. In this presentation, we explore systemic facets of travel medicine.

Firstly, CLD mapping of biological processes. CLD encoding is a proven technique of identifying causal loops which leads to a better understanding of underlying biological connections and more efficient problem solving. Its application on travel related instances is examined through the unbalancing of integral balancing loops of the human body, ignited by causal agents such as high altitude and excessive heat. The human body features a variety of self-regulating mechanisms set to preserve the relative constancy of the internal indexes connected to the viable region, meaning that occurring disturbances trigger a set of actions aiming at the eventual elimination of the initial discrepancies. However, if the deviation from the zone of vitality is high, as in the above-mentioned extreme conditions that exist in many tourist destinations, homeostatic mechanisms are often insufficient leading to an unbalancing of the organism's balancing loops requiring medical care for the indexes to be re-established within the limits compatible with one's survival.

Secondly, risk management, with special reference to Swiss Cheese Model. The Swiss Cheese Model is a widely used accident prevention model initiated by the British psychologist James Reason that conceptualizes accident as the result of aligned voids between the different layers of an incident. Risk management is inherent in all travel medicine policies regarding that unforeseen outburst of infectious diseases can seriously affect tourism and risk factors must be addressed. Pre-travel risk analysis contributes to the identification and minimization of potential risk factors, depicted as holes to the successive layers of safeguards in the SCM model, serving as a useful tool for both the country of origin to protect its citizens and the host country to maintain a high-quality level of tourism product.

Thirdly, modelling doctor patient relations as Paskian Conversations. Exchange of information between patients and doctors in travel-related diseases can be modeled as Paskian Conversations with three learning agents, the Doctor, the patient and the body of the patient, to ensure the creation of an adequate frame of mutual understanding that is vital for the construction of a “therapeutic synergy and the overcoming of language and cultural differences.

**Keywords:** Travel Medicine, Tourism, Systems Thinking, Causal Loop Diagrams, Conversation Theory



## **EA-15**

**Scientific Areas:** Entrepreneurship, Large Enterprises

### **Systemic strategy for corporate approach for governance and administration**

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#### **EXTENDED ABSTRACT**

The progress of the sciences and the development of technology creates innovative ideas and the need of product or service, in more cases "out-of-the-box". To allow these ideas to implement, they must be some significant steps so that the completion to have high performance and duration over the time.

In this paper we present tools and methods on business strategic planning, business plan creation and how this is depicted in the Business Model Canvas, a tool for displaying the business model. Along with the usage of DCSYM, the systemic methodology, through which we depict the Business Model Canvas, we are able to have the benefits from the methodology and the tool in one.

Subsequently and after the design will focus on information systems and how they serve – meet the strategic planning. Then we refer succinctly to applications that serve the creation of business plan and through them we understand the requirements arising by these in order to create a comprehensive business plan.

Afterwards we mention the ERP systems which serves the functionality and purposes of the company and how to organize and control this through the ERP. For controlling, we mention the framework COBIT 5. The COBIT 5 is a government tool of information systems with several support tools that help executives to bridge the distances between the technical aspects, requirements for control mechanisms and operational risks and ultimately to gain significant benefits from its use. Our aim is to showcase the capabilities of information technology in the design and the proper functionality of the company.

Concluding all above, we reflect the Business Model Canvas of two airlines using the DCSYM methodology. WE continue with the comparison of the results where it becomes apparent the stages from conception of the idea till we put into operation the business plan in a way understandable and easily adaptable. This example is a complete depiction of systemic strategy for corporate approach for governance and administration.

**Keywords:** Business Model Canvas, business plan

## **EA-16**

**Scientific Areas:** Business Continuity, Organizational Behaviour

### **Corruption and Bribery: Diagnosis and treatment**

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#### **EXTENDED ABSTRACT**

Corruption and bribery are serious threats to the sustainability of an organization that 'fights' in a highly competitive environment, especially in such an uncertain situation as the economic crisis that Greece is facing.

In corruption research, it is often argued that in "high-trust " societies, i.e. societies with a high level of trust in anonymous others and institutions, there exist lower corruption rates than in "low-trust " societies. As demonstrated in this presentation, this holds true only for a generalized trust, i.e. trust which is neither situation nor person specific; the higher the (generalized) trust in anonymous others and institutions, the lower the corruption. Also (particularized) trust of an entrepreneur towards a public servant to deliver services as agreed seems to foster corruption. Insofar, in environments with a low level of generalized trust, the selfemployed develop a high particularized trust (in friends, kins, and public servants) through engaging in (business) networks and which apparently becomes a breeding ground for corruption.

Also (particularized) trust of an entrepreneur towards a public servant to deliver "services as agreed " seems to foster corruption. Insofar, in environments with a low level of generalized trust, the selfemployed

Efforts to control corruption increase levels of trust in the ability of the state and market institutions to reliably and impartially enforce law and the rules of trade. Such trust facilitates the development of arms-length trade and the coordination of complex economic activities. We posit that better control of corruption will also be associated with rising levels of innovation and entrepreneurship. Absent such trust, however, monitoring and other transactions cost should restrict the scale and scope of trade and thus, hamper productivity and investment in innovation and entrepreneurship. Many initiatives that attempted to fight corruption and bribery, by adopting many Services of General Interest in Greece, failed as they were non-political, and most of the corruption in developing countries is inherently political.

This presentation aims to highlight the causes and the consequences of corruption and bribery that emerge in an organization or in a Service of General Interest in Greece, as well as to propose factors for diagnosis and treatment.

**Keywords:** Corruption, bribery, level of trust and entrepreneurship.

## **EA-17**

**Scientific Areas:** Politics, Law & Bargaining, TOURISM DEVELOPMENT

### **REGIONAL INEQUALITIES IN GREEK TOURISM DEVELOPMENT**

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#### **EXTENDED ABSTRACT**

In recent times, the attention given to the importance of tourism as a particularly efficient way to promote regional development has significantly increased, owing to the capacity of tourism to create income and employment and to generate synergies within other economic sectors. Tourism is worldwide considered to have a key role in the economic development of regions, and therefore, is widely used to reduce regional disparities and to improve quality of life standards in local communities.

Greece has a long tradition in tourism, mainly due to a gifted natural environment and rich cultural heritage. However, tourism development across regions is highly unbalanced. This is attributed particularly to the highly insular and mountainous geomorphology of the country, the uneven distribution of natural, socio-cultural and environmental resources, and the lack of appropriate regional and tourism development policies during the post war decades. The dominance of the mass tourism model adopted since the early seventies in the country and the extensive structural inefficiencies, are effectively hindering the existing potential for a balanced and viable tourism development.

Regarding Greece, tourism is considered to be the driving force of its economy, especially since it has shown signs of resilience during the current financial crisis. However, despite the good statistics, the structural problems of the tourism industry (e.g. seasonality, low-medium quality of the tourist product, the issue of the "sharing economy") remain and enhance the crisis in Greek tourism. This is a consequence of the dominant development model of "sun and Sea" (Sun Lust) and the offered tourist product that imposed the massification of tourism, which during the financial crisis intensifies and creates additional problems in the profitability and competitiveness of the Greek tourism industry.

The main objective of this paper is to investigate tourism development disparities among Greek regions and to identify factors and occurring patterns that affect the tourism development of regions in order to formulate a strategy and policy framework for balanced regional tourism development. In the first section of this paper an overview of the theoretical approaches related to tourism and balanced regional development is provided. Next, the role of tourism in the Greek national economy and the country's position in the international tourism market are examined. Following an analysis of the evolution of regional tourism disparities in Greece during the last decades in the third section, quantitative techniques are used to assess intra- and cross-regional tourism inequalities in the fourth section.

The results reveal the existence of strong regional disparities in tourism development among Greek regions, although the development pattern differs among different types of regions. Finally, in the last section some concluding remarks and policy recommendations are presented, leading to the identification of issues for further research.

**Keywords:** financial crisis, tourism development, regional inequalities.

## **EA-18**

**Scientific Areas:** Strategic Management, Quality Management

### **Deming Management Method and its Influence in the U.S. Federal Government**

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#### **EXTENDED ABSTRACT**

Last century was marked by a terrible fact of humanity, World War II. The Second War worldwide affected all levels of our planet. New facts occurred that shaped the subsequent geopolitical and economic forces increasing the levels of globalization in business, marketplace, economic strength, workforce, natural resources management, science and technology (Kriemadis, Thomopoulou & Sioutou, 2017). Information related to those facts flows across the borders in a rapid way, the citizens of the world make comparisons and blame their bad situation on the government and its leaders. So they elect new leadership, but this is not enough to assure them a better life. Deming (1994), one of the most various managerial theorists, argued that new leaders, apart of their best efforts and hard work, should possess new knowledge to bring improvement in peoples' life.

William Edwards Deming, after World War II was invited by the Japanese government to establish management consultant practice for their industrial revitalization. Thus Deming, with kindness and respect to a defeated nation, introduced to Japanese industry the Deming management method based mainly on Statistical Quality Control and became the one responsible for "the Japanese miracle". By late 1970s American manufactures faced a considerable portion of their market share, specifically in automobiles, going to Japan and discovered that this was due to Deming's management method and sought his services immediately. By early 1980s, after over three decades of managerial consulting, Deming started spreading his management principles to U.S. government with presence in each of the 27 states and within the Department of Defense (Alan, 2008).

Deming demanded, America to abandon the prevailing style of management which encouraged competition over cooperation, immediate profits over long term, inspection over empowering and zero defects over continuous process improvement. He claimed that it is required transformation to a new style of management for the Industry, Government and Education (Deming, 1994). Deming recorded the essence of his philosophy in 14 points for management, defining a structured system for continuous improvement of products and services, leadership for change, building quality into products and services, satisfaction of internal and external customers, cooperation with suppliers, empowering, continuous training, encourage of self-improvement and set the frame of TQM and other quality management systems. (Deming, 1986).

The aim of this paper is to examine the implementation of Deming's Management Method and its influence on the U.S. Federal Government, by using a

comprehensive systematic literature review of the relevant literature on Deming's Management Method and its importance for the Federal Government of America.

This study is expected to provide a conceptual framework for government and public administration officers and strategic planners, in order to identify the appropriate Management philosophy toward the improvement of the overall quality in their organizations.

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**Keywords:** Keywords: Deming Management Method; TQM; U.S. Federal Government; Japanese miracle; transformation.

## **EA-19**

**Scientific Areas:** Strategic Management,

### **THEORY BUILDING: EXPANDING ANSOFF'S STRATEGIC MANAGEMENT THEORY AND RELATING IT WITH TQM THEORY**

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#### **EXTENDED ABSTRACT**

Drucker (1980) pointed out that organizations face new realities, new challenges and new uncertainties in the economic, political and social contexts. Ansoff (1988) stated that in the twentieth century the environment has become more novel, complex, and unpredictable. Chandler (1962) recognized the importance of environmental turbulence as well as the importance of the alignment between the organization's strategy, structure and its environment. According to Ansoff and McDonnell (1990), as the environmental turbulence levels changed, management developed the following systematic approaches to dealing with the increasing unpredictability, novelty and complexity (long range planning, strategic planning, strategic posture management, strategic issue management, strategic surprise management). As environmental turbulence increases, the organization implements real-time systems called strategic issue management and strategic surprise management. These two strategic management systems are more appropriate for high turbulent environments whereas the positioning systems are used in more stable and less turbulent environments

Ansoff's Strategic Management Theory (SMT) and Strategic Success Hypothesis (SSH) states that an organization's performance potential is optimum when the following three preconditions happen:

- (a) Strategic aggressiveness matches environmental turbulence.
- (b) Organization's capability matches strategic aggressiveness.
- (c) The components of the organization's capability must be supportive of one another.

Ansoff's SSH has been tested for validity by many researches. They all concluded in general, that organizations (private and public) which matched their strategy to the environment and supported the selected strategy by organizational capability had a better performance.

Given that strategic management theory is very essential to the survival and future growth of any organization, the purpose of this study, which is conceptual, is to expand the Ansoff's SMT and combine it with the recent developments of Total Quality Management and Excellence Management models.

Methodology approach: Complementing Ansoff's theory of strategic management and proposes that this theory should be validated by empirical research.

## Results

### Proposed model to expand Ansoff's Strategic Management Theory

Environmental turbulence, according to Ansoff and McDonnell (1990), is a combined measure of the changeability (complexity and novelty of the organization's environment), and predictability (rapidity of change, visibility of the future) of the organization's environment.

According to Ansoff and McDonnell (1990), organization's capability must also be matched to the environmental turbulence. Competence is a component of organization's capability (Ansoff, 1979, 1984, 1990). Competence consists of the following attributes: (a) problem solving skills and process, (b) management system, (c) information system, (d) organizational structure, (e) rewards and incentives, (f) job definitions, (g) technology, and (h) congenial functional culture. However, competence does not take into account the quality management aspect which contributes effectively to the survival, competitiveness, and further development of any organization (Deming, 1990).

The author will propose a new dimension for the competence component of the organization's capability. The new proposed model will contain the quality dimension and it should be tested empirically in different industries in order to be validated.

### Conclusions and Implications for Management

Based on the Ansoff's SMT, the contemporary manager should:

- (a) Realize that no single prescription for success applies to all organizations in today's environment. Environmental turbulence is the most important factor in determining an organization's performance.
- (b) Improve the organization's capability which is critical in achieving high performance. It will affect both competitive and strategic activities of the organization.
- (c) Adjust the proposed competence component and in particular, the quality dimension to the level of environmental turbulence.

In turbulent environments, contemporary organizations need to have good operational performance as well as increased emphasis on strategic activities. The proposed quality dimension in the competence component of organizational capability will contribute to the enhancement of quality and productivity of the organization.

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**Keywords:** Ansoff, strategic management, TQM, excellence

## **EA-20**

**Scientific Areas:** Human Resource Management,

### **LEADERSHIP IN SPORT BUSINESS**

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### **EXTENDED ABSTRACT**

It has been investigated that transformational leadership promotes the progress of the organizations and their human resources (Kammerhoff, Lauenstein, & Schütz, 2018). Both the constant improvement of the human capital and leadership are fundamental for the service sector like sport business which functions in today's demanding business environment. Under these circumstances, managers are highly responsible for the organizational success (Tergraven Ruzzier, & Kaše, 2016), due to the fact that employees' emotions, attitudes, behaviors and interaction with the customers rely on managers' role (Avolio et al., 2004; Wallace, de Chernatony, & Buil 2013). Moreover, the research has proved that sport organizations run by transformational leaders accomplish organizational goals, superior teamwork, and performance (Wallace & Weese, 1995; Wang, Courtright, & Colbert, 2011). Effective management relies on necessary changes that stem from transformational leadership in order to create commitment, and a greater quantity of work as well as problem solving (Buila, Martínezb, & Matutec. 2018; Yukl 2013; Al-Husseini & Elbeltagi, 2016). Nevertheless, research regarding leadership in Greek sport sector is still limited.

The primary purposes of this study were: (a) to determine the extent to which leadership is applied to Sport business in the region of Attica and (2) to examine the relationship between leadership and business performance in the abovementioned organizations.

#### **Methods**

The particular research is on-going and up to now data has been gathered from a random sample of 126 managers of 126 Greek Fitness Clubs (from a total sample of 180 large fitness clubs in the Region of Attica, which were recognized by Association of Fitness Clubs Owners). There was a questionnaire, developed by Papaioannou and Kriemadis (2017) following the literature on leadership, suggestions and input from reviews selected by a selected panel of experts. There was specific information provided by the questionnaire referring to the leadership in the Greek sport sector, managers' perceptions in relation to the performance of the Greek Fitness Clubs and demographic characteristics of the respondents. A five point Likert Scale was used in order for the questions to be answered. The content validity of the questionnaire was determined by a panel of experts including academics and professionals in the fields of human resource management and sport management research. The reliability of the scale was found to be:  $\alpha = .92$ . Also, the particular research used the subjective way of measuring performance. Meaning that managers had to evaluate the performance

of their sport business (profit, ROI, sales volume and market share) in relation to their current years' objectives, in relation to their last financial years' objectives and finally, in relation to their major market competitors on a five-point Likert scale. Descriptive statistics and Kendall correlation were used to examine variables relationship using SPSS software (version 23).

#### Conclusion

The results indicated that almost 58% of the sport businesses applied leadership from a "great extent" to a "very great extent". Also, the results showed that there were significant and positive relationships between leadership and business performance of sport businesses. The present findings suggested that leadership is at the core of sport business activity as it offers to the viability of sport businesses (Wang et al., 2011).

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**Keywords:** Leadership, business performance, Sport business

## **EA-21**

**Scientific Areas:** Operations Management , Procedural Systems

### **A Systems Approach to Information Security for the Travel and Tourism Industry**

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#### **EXTENDED ABSTRACT**

The topic of information security in the travel and tourism industry is of vital importance. Many travelers make available their personal information to secure travel visas and logging/car rental services, make their flight and hotel accommodations online, and make use of their credit cards while traveling. In recent years both government agencies and private organizations have begun to focus their attention on information security issues seeking viable solutions in order to mitigate the negative impacts of security incidents on their operations and the affected destinations.

Information security refers to the preservation of the confidentiality, integrity and availability of information, where confidentiality relates to non-disclosure of sensitive information, integrity relates to the information's accuracy and completeness, and availability relates to the information's accessibility and usability by authorized entities, upon demand. In turn, an information security incident refers to a single or a series of unwanted or unexpected information security events that have a significant probability of compromising operations and threatening information security.

Finally, an information security management system refers to the set of interrelated or interacting elements of an organization to establish policies and objectives, and processes to achieve those objectives. In short, the implicit aim of an effective information security management system is to ensure business continuity by minimizing overall risk (effect of uncertainty on objectives) in a manner that is proportionate to the complexity of the organization's internal context and the external networks associated with its activities.

Organizations, however, frequently adapt information security management policies, procedures, and practices that fail to effectively address the dynamic complexity inherent in their (internal and external) business environment, relying on simplification rather than the holistic treatment of complexity.

Moreover, information security is frequently treated as a discrete event rather than an integral part of the organization's overall management paradigm. In this context, decision-makers often approach information security risks through actions that focus on the linear cause-and-effect chains in a disconnected set of isolated organizational elements, disregarding the relations that define their emergent vulnerabilities (weakness of an asset or control that can be exploited by one or more threats).

This work will introduce an information security management model that is based on a systems approach, which places emphasis on the organizational structures

and the processes within these structure so as to effectively identify, analyze, and monitor issues of risk arising from the organization's sociotechnical infrastructure and its external environment.

**Keywords:** Information security, systems approach

## **EA-22**

**Scientific Areas:** Organizational Development & Performance Management,  
Small- & Medium-sized Enterprises

### **Domain Driven Design and Soft Systems Methodology for Information Systems in Tourism Industry**

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#### **EXTENDED ABSTRACT**

The tourism industry is characterized by the large number of stakeholders. When developing or adopting a new Information System the variety of interests or perspectives form a complex situation which is a typical case of a complex system. Indeed, even in the case of a small business, the views of the owners, employees, customers and the local community can create a tangle of relationships and perspectives. All these must be taken into consideration in order to ensure the operational success of the system, the acceptance by the users and the impact on business results. The above paradigm is a typical case in systems of any type and of any size like the company's ERP or the company's web site.

Domain Driven Design (DDD) is a software development approach intended for complex projects where complexity refers to the requirements as well as the interactions between designers, developers and users of the product. It was introduced by Eric Evans (2004) in his book of the same title. The idea is based on the following principles: (a) Start focusing on the core domain and domain logic, (b) Base the design on model(s) of the domain, (c) Initiate a creative collaboration between technical and domain experts and (d) Iteratively refine a conceptual model of the domain and the related problems.

On the other hand, Soft Systems Methodology (SSM) is an approach to the management of change that has been developed primarily by Peter Checkland and his colleagues as an action research program. It can be employed to manage the "mess" in soft problems like business and environment requirements, customer's expectations, employee's perspective and many other complexity factors. SSM is implemented through 7 stages one of which is the "root definitions" through the CATWOE statement. CATWOE stands for Customers, Actors, Transformation, Worldview, Owner and Environmental constraints that describe the change that will be implemented.

Since both DDD and SSM are based on models, a modeling approach is needed. Design and Control Systemic Methodology (DCSYM) offers a means to create models in a systemic context and to use them as a basis for the collaboration between the interested parties. DCSYM can be used to facilitate a creative dialog between stakeholders in a transformation process or in a new project.

The purpose of this study is to extract ideas and lessons from DDD and apply them to Information Systems Development in tourism industry through the SSM approach. The result is a practical guide that implements the ideas of DDD in the systemic context of SSM using DCSYM as a modeling approach. This practical guide aims at facilitating the collaboration between tourism domain experts and IT technicians in information systems development.

**Keywords:** Domain Driven Design, Systems, SSM, DCSYM

## **EA-23**

**Scientific Areas:** Politics, Law & Bargaining, General Data Protection Regulation Compliance

### **A GDPR Compliance Package- The Example of an IT SME**

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#### **EXTENDED ABSTRACT**

Since May 25th of 2018, things have changed in the domain of proper business conduct due to the commencement of power of the General Data Protection Regulation (GDPR) of the European Union (EU) for the protection of the Personal Data used in Business and also Social Services in national and international level, and the restriction of the Data flow required not only in trans-European territory but also globally. As to secure the lawful and ethical use of Data collected, along came numerous provisions and conduct guidelines, depending on the type of business carried out and on the nature of Data being processed.

In this Study, the Digest Package applied on a telecommunications company is examined, investigating the way to achieve maximum compliance with the necessary and applying rules of the GDPR legislation. Going through the very text of the Regulation, the needs of new Processes and Procedures are identified, designed and pictured, composing and presenting in full a real-working-environment stream of Information and dynamic working relationships in the meeting-the-market-needs agenda of a Greek SME.

More precisely, the telecommunications company serves as a Processor to other companies being the Controllers of Processes involving Personal Data analysis, such as Banks, major Communications Service Providers, Tourist Agencies and Hotels. Therefore various compliance issues arise depending on the package of services provided to each one of these Controllers, especially in the cases where Special Categories of Personal Data (Sensitive Data) are being collected, processed and shared. The case of Tourist Agencies and Hotels will be thoroughly developed.

With respect to the Confidentiality Clauses applied on the Company by its Non Disclosure Agreements (NDAs) and Contracts, the Company wishes to retain its Anonymity and therefore will be referred to as the IT Company.

**Keywords:** GDPR, compliance, data protection, sensitive data



## **EA-24**

**Scientific Areas:** Strategic Management, sustainability

### **Re-organization of the General Secretariat of Information Systems and Administrative Support by following a Systemic Approach involving the implementation of a Quality Management System(ISO 9001:9015)**

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#### **EXTENDED ABSTRACT**

In this study, the role of the General Secretariat for Information Systems and Administrative Support, its basic responsibilities and its need for reorganization and restructure, is evaluated and analyzed. The G.S.I.S.'s role is to manage an abundance of financial issues of the Greek Government, for the Ministry of Finance as well as the political leadership.

Firstly, its basic structure according to Presidential Decree No 142 is analytically presented using the DCSYM systemic methodology, and with the help of the systemic tool dcsym (case tool), the Organization is depicted, as a uniform system with subsystems and individuals. With the use of systemic tool dcsym the relationships and interactions that develop between the departments are presented.

Then follows the strategic plan, <>, that was developed by its employees, its Administration and the Project Coordination Team in February 2013 as well as some elements of the G.S.I.S. Assessment Report, which was drafted in October 2016 . Due to the rapid development of new technologies, the need has presented itself for their constant exploitation and their immediate implementation in the functions of the Ministry. The need for development imposes the parallel reorganization of structures and procedures, with the condition of the most effective exploitation of technology's capabilities and the increase of the Organization's efficiency. Their transformation, through their modification using the business model canvas helps to redefine the strategic business plan in order to incorporate the trends and to make the best possible use new technologies.

The basic axis of implementation and effective exploitation of these attempts is the application of a Quality Management System that is depicted through systemic approach. With the use of the newly revised International Standard ISO 9001:2015 a set of actions and steps that should be followed in order to avoid unwanted situations, which are best depicted through systemic archetypes, is unraveled. Applying a quality management system is essential to the organization as it will ensure growth, sustainability, and will reinforce the trust of the citizens. It provides a framework according to the systemic instruments which aims at corrective action mechanisms. The quality management system will help the organization to better understand the needs of interested parties and plan its new processes more efficiently.

The invocation made in systemic theories - approaches and the use of some systemic methodologies and tools such as the Structures Democratic dialogue SDD, systemic dynamics with problem modeling (Causal Loop Diagrams) and flow and accumulation diagrams (Stock and Flow Diagrams), the creation of a simulation of the system studied using the software Vensim PLE, the practical knowledge management, The Lean Six Sigma quality measurement policy, using the DMAIC methodology (Define-Measure-Analyze-Improve-Control), the cause-effect analysis chart Fishbone, are proposed in the implementation of the standard and aim to better understand and implement the quality management system. Also, the application of archetypes, help to identify unpleasant behaviors that may already developed.

In conclusion, utilizing Beer's Viable System Model, G.S.I.S.'s viability and specifically its position and its functions, is investigated and reviewed. Simulating the G.S.I.S. in the VSM according to the recommended organization chart, the opportunity is given to discover probable deficiencies and weaknesses of the proposal that is given according to the strategic plan.

**Keywords:** Systemic, approach, quality, management system, organization

## **EA-25**

**Scientific Areas:** Banking, Organizational Behavior

### **Systemic approach for the organizational structure and the operation of the Piraeus Bank Group before and after its merger with other banking groups.**

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#### **EXTENDED ABSTRACT**

In the present work, an attempt is made to analyze the organizational structure and operation of the Piraeus Group during the mergers and 3 years after them.

In this context, Systemic Theory and Thinking are presented in detail in Chapters 2 and 3 of this paper. In Chapter 4, using all the available data collected by the bank, these changes are analyzed using the DCSYM system methodology. Finally, chapter 5 discusses changes that have been made with another systemic methodology of VSM.

The goal of this work is to use these systemic methodologies in order to "emerge" problems presented by the organizational structure of the bank and to propose ways of solving these problems.

**Keywords:** Piraeus Group, System Analysis, DCSYM, VSM, VENSIM

## **EA-26**

**Scientific Areas:** Operations Management , E-business Solutions

### **Travel Insurance**

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### **EXTENDED ABSTRACT**

#### 1) Why Buy Travel Insurance?

When the unforeseeable becomes reality, you want the coverage that travel insurance can provide. Even those who play it safe can face medical emergencies, political unrest or worse. When the unforeseeable becomes reality, you want the coverage that travel insurance can provide. Much more than trip cancellation, travel insurance is financial protection with emergency assistance to keep you safe as you travel the world. Many of your travel arrangements may be non-refundable or subject to strict cancellation penalties. Often times, the lowest cost fares, cruise and land packages generally include significant penalties if you are unable to actually take your trip. For 5-7% of your trip cost, travel insurance can help you avoid those penalties and protect your investment.

#### 2) How Does Travel Insurance Work?

Travel insurance is a collection of benefits and services designed to protect you in three key ways

**2.1 Coverage For Your Travel Arrangements :** Among the most frustrating experiences a traveler can have are trip cancellation, trip interruption, and travel delay. Should unforeseeable reasons force you to cancel, interrupt, or delay your trip, travel insurance aims to reimburse you for the cost of your travel arrangements.

**2.2 Coverage For You :** Probably the most important coverage travel insurance can provide is coverage for you. Protection against the costs a traveler can incur from unexpected medical expenses, medical evacuation, and non-medical emergency evacuation can be high. Travel insurance can protect travelers from those costs, so they can focus on their health and safety. Not how it will affect their bank accounts.

**2.3 Coverage For Your Belongings :** When we travel, we take baggage and other personal items on our trip. Travel insurance can reimburse travelers for the money spent to replace these items when baggage and personal effects are delayed, lost, or stolen.

#### 3) When To Buy?

**3.1 Purchasing within the time sensitive period** expands coverage, such as the Pre-Existing Conditions Waiver. It also allows your policy to provide coverage for bankruptcy or insolvency of a travel supplier and allows you to qualify for the optional "Cancel for Any Reason" Benefit.

3.2 Important Tip! Waiting until final payment of your trip is a mistake. Purchase your travel protection within the time sensitive period. This way, you'll receive broader coverage at the same price you would pay if you purchased your plan with final payment of your trip.

#### 4) What The Travel Insurance Can Cover :

##### Insurance Related Benefits

- Trip Cancellation & Interruption
- Missed Connection
- Travel Delay
- Medical Expense/Emergency Evacuation
- Baggage/Personal Effects Loss & Delay
- Cancel For Any Reason
- Air Flight Accidental Death & Dismemberment

##### Non-Insurance Benefits

- On-Call 24-Hour Assistance Services
- 24-Hour Assistance Services help you in emergency situations.

#### 5) Conclusions

In conclusion buying a travel insurance plan you can receive :

- Cancel For Any Reason, • There a variety of plans to suit your insurance needs no matter what your situation.
- 24-Hour Emergency Assistance Services.
- A 24-hour emergency assistance number available to you anywhere in the world

**Keywords:** Insurance,Travel,Emergency,unforeseeable,trip,benefits

## **EA-27**

**Scientific Areas:** Business Process Modelling, Finance

### **Financial Analysis through Systemic Methodologies**

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#### **EXTENDED ABSTRACT**

The purpose of this study is to apply Systemic Methodologies into frequent problems that are faced by companies. This study uses Systemic Methodologies in order to analyze numeric data and behaviors, to simplify complex structures and to predict and prevent future difficulties in the present business world.

Initially, in the methodology of causal loop diagrams, we study behaviors of various variables that have an impact on the market and the business world, such as consumer need, price, new customers, competitors as well as the time variable for carrying out a project. Causal loop diagrams illustrate dependency relationships of variables that should be taken into account, in each case.

Following, in the DCSYM and VSM methodologies, we design organizational systems, in order to control the communication, to identify and address the weaknesses of a business, so as to set the control in place.

Finally, in the simulation methodology VENSIM, we build models that are adapted by the market and business variables. The advantage of this methodology is that we are able to adapt each change in the numeric variables and re-build the model in the changeable data each time.

In conclusion, the purpose of this study is to provide a more targeted analysis for the business world. Systemic Methodologies provide significant effort and highly informative support for the business. They are a helpful tool for someone to propose improvements, identify the pick holes and ensure the healthy outcome of the business.

**Keywords:** Analysis,Modelling,Business,Decision,Systemic,Methodologies

## **EA-28**

**Scientific Areas:** E-business Solutions, Strategic Management

### **THE IMPACT OF MOBILE BUSINESS ON TOURISM INDUSTRY**

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#### **EXTENDED ABSTRACT**

The adoption of mobile business leads to the development of more effective and efficient business models and processes, affecting business performance. Mobile business modifies existing working habits, enabling employees to work out of office using mobile devices anytime and anywhere. It brings advantages to employees, partners and customers and improves business tasks and processes. Thus, more and more firms and sectors tend to adopt and implement mobile business technologies. Mobile business practices are also adopted by the tourism sector, which is one of the largest industries worldwide with a huge financial impact.

Organizational mobile business implementation is closely related to Information and Communication Technologies (ICT). ICTs, such as mobile hotel reservation systems (MHRS) can be regarded as a relatively new competitive resource affecting directly and indirectly firm's structure, image, financial performance, etc. The use of ICT do not only reinforce tourism companies' operations, processes and applications, but also increase their competitiveness and performance. They also allow potential consumers to be informed and purchase tourism products and services. Therefore, many researchers argue that ICT and especially mobile business applications can create competitive advantage and improve firms' performance, productivity, operational efficiency and position to the market.

The objective of this paper is to investigate and clarify the impact of mobile business on the tourism industry, analyzing the core factors affecting the tourism industry and especially the tourism sector, such as hotels. As the competition is constantly increasing, in this sector, hotel managers must innovate through strategic vision, differentiation and new technologies. Therefore, the paper aims to examine how the development and adoption of mobile business practices can lead not only to the acquisition, but also to the sustainability of competitive advantage

Based on previous literature and taking into account Technology Acceptance Model (TAM), Unified Theory of Acceptance and Use of Technology (UTAUT) theories, it develops a theoretical framework aiming to demonstrate the competitiveness potential of mobile business adoption in the hotel sector. It also discusses how hotels could gain sustainable competitive advantage. It finally shows that the role of ICT and especially of mobile business is extremely significant as it could be an extra value added resource not only for tourism companies, but also for consumers/tourists.

**Keywords:** mobile business, organizational change, Information and Communication Technology, competitive advantage

## **EA-29**

**Scientific Areas:** Logistics, Operations Management

### **Modeling and Analyzing the Integration of Logistics Operations Management to the Inter-modality Concept of Shipping Transportation: a systemic approach**

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#### **EXTENDED ABSTRACT**

Last decades, a number of worldwide container shipping companies turned its interest in the so-called intermodal transportation with the potential of integrating its operations to door-to-door services regarding freight forwarding. This emerging tendency led relevant academic communities to focus on core procedures of supply chain and logistics management in order to solve new problems of modern transportation. Nowadays, shippers increasingly emphasize on the required flexibility and frequency that is offered by hinterland transportation for becoming more competitive in container shipping market. Flexibility is obtained through effective coordination and cooperation of the engaged stakeholders in forwarding process and also the early adoption of contemporary information systems. Broadly speaking, inter-modality refers to the use of multiple modes of transportation as rail, ship, truck without any handling of the freight itself when changing modes. However, the main nodes which obviously contribute to the inter-modality effectiveness are the big ports. On these places, a great number of stakeholders need to be efficiently coordinated in order to achieve the smooth functionality of uninterrupted services.

On this study, we primarily focus on the Logistics Operations taken place on a worldwide Shipping and Forwarding company. Then, we decompose the structure of the corresponding department in order to further focus on its Freight Forwarding operational unit. This unit is at the core of the potential of an integration regarding shipping and hinterland transportation. In the sequel, we recognize all the necessary communications among the parties of the company which are of vital importance for being implemented the required coordination and cooperation. The final modeling of procedures relevant to actions needed to be taken on the interface of liner operations and freight forwarding, offers us important information for strategic decisions.

By a systemic point of view, on the first part of this study we use the DCSYM Case Tool for the depiction of the structure of the relevant systems. Furthermore, we locate all the currently engaged communications arising among the systems and sub-systems. With the implementation of DCSYM methodology we are able to detect any structural or communicational problems with reference to our system-in-focus. In addition, we can recognize any potential of structural improvement for the benefit of system's performance and productivity. On the second part, we use the VSMoD software tool which enables us to approach our system as being viable based on the Viable System Model theory. On this phase, we can point out important channels of communication diffused on all the management levels for



the ever increasing adaptability of the system to its environment. On the last part of this study, we use Vensim software for the application of system dynamics to vital inter-departmental procedures in favor of inter-modality. More particularly, we search for a certain degree of coordination between the two involved operational units for being achieved their effective cooperation. Finally, Anylogic software is used for a hybrid modeling approach (system dynamics – agent-based), pursuing on that way a more detailed simulation modeling.

**Keywords:** inter-modality, freight, ports, DCSYM, logistics, coordination

# E-Posters

## **EKN-1**

### **Knowledge Management Effect on Manufacturing Performance**

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#### **EXTENDED ABSTRACT**

Knowledge Management (KM) deals with the management of three vital aspects which are knowledge resources, processes and factors. This research investigated the effect of KM on manufacturing performance and their relationship. KM was represented using various constructs for knowledge resources, KM processes and KM factors (i.e. human capital, knowledge and information capital, intellectual property, knowledge acquisition, knowledge creation and generation, knowledge utilization and application, knowledge storing and updating, knowledge sharing and transferring, knowledge protection, culture, management leadership and support, organizational infrastructure and technology, and strategy). Each of these constructs has its own set of measurement items or metrics. On the other hand, manufacturing performance was measured based on quality, cost, time and delivery, flexibility, and customer satisfaction. Data for KM and manufacturing performance were collected from a large number of manufacturing companies through a questionnaire survey. Based on these data, various hypotheses that linked KM with manufacturing performance were tested using structural equation modeling. First-order and second-order confirmatory factor analyses were done on the measurement models and the fitness of the overall structural model was evaluated. The hypotheses testing results showed that KM has a significant and direct effect on manufacturing performance, implying that it is a means to improve production performance. In essence, KM factors have the strongest positive effect on manufacturing performance, followed by knowledge resources and KM processes.

## **EKN-2**

### **Education and Tourism: Systemically Extending Case Studies from Past Experiences**

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#### **EXTENDED ABSTRACT**

"Changing lives through education and travel"(\*1) is one today's many university-level mottoes promoting education and tourism-related programs. It is believed that in our era it is a well-established assumption that education and tourism serve parallel domains aiming to systemically enhance socially-oriented concepts, like better understanding of the reasoning of being, togetherness, practical business aspects, exposure to different global realities, experience expansion, self-actualization potential, life contradictions, process limitations, identification of daily routines, meeting visionary objectives, and so on.

Obviously the analysis of factors involved in the combination of education and tourism is based on the existing organizational experiences, in-depth study of syllabi propositions, the "blending" of such programs with the offered subject matter at the destination country, as well as the quality of the individuals that lead these efforts is critical of the success of such efforts.

This paper capitalizes on the different methodologies used in a variety of cases in the business administration field(\*2) that this individual faced during the last thirty five years of academic work (\*3\*4). Moreover, it elaborates on undergraduate, graduate and professional business courses that are offered as student experiences of the following types:

- Three-day, professional or of targeted knowledge.
- Seven-day, undergraduate, graduate or professional.
- Month-long, undergraduate or graduate.
- Semester or year-long undergraduate and graduate student exchanges.
- Academic Tourism, i.e. Conferences.
- Faculty and staff training and retraining opportunities.
- Specific propositions that can be serviced by the existing facility and staff.

Elaborate infrastructure is needed for such activities that deal with special travel permits, hotel arrangements, tourist sights visitation, corporate meetings, executive speeches, identification of foreign individuals who are able-ready-willing to support these initiatives and so on.

The individual overseeing these activities must be very experienced in global travelling and capable to support major program-related crises, from student sickness to any major unexpected event.

## **EP-1**

### **Athonian Management A New 1000year-Old Management Ethic**

**Theodore Spiliotis**  
E-SURVEY

#### **EXTENDED ABSTRACT**

What does a 1,000year-old community management system has to offer to current debates on ethics across applied professions?

In this poster, we will be presenting key findings from a recent study published in the book "The CEO-Monk" (Spiliotis, 2017) on the management practices that Monasteries in the Holy Mountain of Athos in Greece are run. The millennium-old method of managing economics, operations, communications and human resources in these establishments has withstood the test of time while it has contributed to a thriving community with characteristics that closely resemble powerful international corporations.

The presentation will offer an insightful case-study, where personal and 'professional' ethics align, and private and communal ethical development is intertwined around a formal 'citizenship' code of equitable conduct and actualized being that has remained unchanged since the 9th century despite the eclectic modernization of the remote monastic community.

In Athonian Management, all aspects of management are grounded on a framework of seven principles defining the central Athonian Ethos – the binding agent of written and unwritten codes that all citizen-monks across the Mount Athos peninsula are called to abide by. Peculiar to this applied Ethics at the center of Athonian Management is the practical distinction between "Intrinsic Ethics" and "Extrinsic Ethics". The former relates to spiritual advancement values for individual monks and a culture of brotherhood in how they relate to each other under the common goal of survival and salvation. The latter addresses the appropriate treatment of guests, visitors or 'end-users' of their monastic life and enterprise. The success or failure of individuals or monasteries depends on the adherence and wholehearted commitment to this Ethos.

What could be learned from such age-old resilient practices for the application of ethics to modern professional and corporate settings? While a sample of suggested interventions will demonstrate ways in which these Athonian Management ethics could be transferred to all aspects of everyday operations of corporations, a particular emphasis will be placed on Economics Management.

The presentation also aims to raise pertinent questions with far-reaching implications regarding corporate culture formation coupled with proposed areas for further study.

## **EP-2**

**Scientific Areas:** Environmental Systems, sustainability

### **The European Union Emission Trading Scheme (EU ETS): empirical evidences from Italian companies**

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#### **EXTENDED ABSTRACT**

The purpose of this paper is to investigate the effectiveness of the European Union Emission Trading Scheme (EU ETS) in promoting the environmental sustainable development of companies.

The institutional framework of the EU ETS reflects the intention of EU policy makers to achieve the sustainable development of companies, i.e. the improvement of their environmental performance and the safeguard of their economic performance (Segura, Ferruz, Gargallo, & Salvador, 2018; UNFCCC, 1992, 1998). The EU ETS involves energy and industrial companies and it is implemented in three phases, i.e. 2005-2007, 2008-2012 and 2013-2020 (European Commission, 2015). The EU ETS is a cap and trade system. On the one hand, it aims to improve companies' environmental performance by discouraging companies from polluting. Companies are required to buy allowances to pollute or alternatively to bear the costs for reducing emissions. After each year, companies have to surrender enough allowances to cover all their greenhouse (GHG) emissions, otherwise penalties are imposed (Marin, Marino, & Pellegrin, 2017). A cap is set on the total amount of available emissions allowances, which corresponds to the maximum level of GHG that companies can emit. The cap is reduced over the phases so that total emissions decrease. On the other hand, the EU ETS provides mechanisms for safeguarding the economic performance of companies. Within the cap, companies receive freely an amount of allowances and can trade allowances with other companies. Therefore, companies can use the allowances allocated freely or can buy allowances to comply with the obligation of surrendering allowances (European Commission, 2015).

Limited and inconclusive studies have analysed the effectiveness of EU ETS in the sustainable development of companies. Some scholars analyse the impact of EU ETS on companies' emissions reductions (Anderson & Di Maria, 2011; Ellerman & Buchner, 2007; Petrick & Ulrich, 2014). Others analyse the effects of the EU ETS on companies' economic performance (Marin et al., 2017; Martin, Muûls, & Wagner, 2016). Recently, Segura et al 2018 analysed the relationship between environmental and economic performance in Spanish companies involved in the EU ETS. That analysis reveals limited information about the impact of the EU ETS institutional framework on the companies' sustainable development.

Against this background, our research paper fills this gap and analyses the effectiveness of EU ETS in promoting companies' sustainable development. To

reach our aim, we follow two steps. First, we apply descriptive statistics to provide a deep understanding of the EU ETS institutional framework and its effects on companies' environmental and economic performance. Secondly, we apply archival data analyses to find if and how EU ETS affects companies' economic performance, over the three phases. We investigate how the institutional changes of EU ETS affect companies' sustainable development.

Through our empirical analysis, we find that the EU ETS is effective in promoting the sustainable development of companies, i.e. it improves companies' environmental performance and safeguards their economic performance. First, we find the increasing effectiveness of the EU ETS in improving the environmental performance of companies over the three phases. Secondly, we find that EU ETS institutional framework does not affect negatively companies' economic performance.

Our research contributes to advance research about the effectiveness of environmental regulation in promoting the sustainable development of companies. Furthermore, our research has practical implications for Italian and European policy makers involved in the implementation of the EU ETS. By offering evidences about the effectiveness of the EU ETS institutional changes, this research encourages policy makers to follow this direction to further increase the EU ETS effectiveness in promoting the sustainable development of companies.

**Keywords:** EU ETS, Sustainable Development, Environmental Performance, Policy Makers, Economic Performance.

## **EP-3**

**Scientific Areas:** E-business Solutions,

### **The sharing economy in tourism**

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#### **EXTENDED ABSTRACT**

This paper will present in brief the emergence of two different types of the sharing economy in tourism. More specifically, we are going to discuss about the development and outspread of shared economy, with the form of sharing platforms, both in the sectors of accommodation and that of sailing (which has to do with both travelling and accommodation).

Although, there has been not much relevant research and the findings are more or less empirical (Codagnone and Martens, 2016), it is a fact that platforms such as Airbnb and Couchsurfing have emerged dramatically the past decade causing real problem to the conventional hotels. These implications are going to be discussed further in the current paper.

Furthermore, platforms such as lya.asia (Credit Suisse, 2015) or borrowaboat.com, as well as the Greek incrediblu.com -which has been recently acquired by the Spanish nautal.com- promise a new experience in holiday making, providing at affordable prices yachts and sailing boats. Thus, both transportation and accommodation are being ensured, in a flexible and comfortable manner.

So, the question is, whether conventional hotels are really threatened by the alternative accommodation types and what their reaction will be. There have been some relevant findings (Gesing, 2017; Credit Suisse, 2015), showing that big hotel chains have established some more flexible and less formal services in their premises

These concerns are going to be further discussed in the current paper.

**Keywords:** sharing economy, tourism, accommodation, sailing, hotel



## **EP-4**

**Scientific Areas:** Marketing, Entrepreneurship

### **Facebook/Instagram Marketing and Tourism**

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#### **EXTENDED ABSTRACT**

It is certain that Tourism is definitely one of the sectors most affected by the development of Digital Technology. Thus, Tourism, Transport and Catering companies are considered to be pioneers in the use of Digital Marketing and Social Media techniques as well as Online and Smart Advertising.

This paper will elaborate on the following issues regarding the interactivity of Social Media Networks and Tourism Services in Greece and abroad:

- The impact of the transition to the Digital Age in major sectors of the tourism industry such as Tourist accommodation, Transport and Catering
- Increased use of tourist/traveling posts and content on Facebook, Instagram and other Social Networks. Analysis of the above tendency/trend and the methods that can be applied by enterprises and professionals of Tourism to take advantage of it.
- Why Social Media can often provide more effective Online Advertisements than Google in the field of Tourism
- Benefits of Social Media Marketing application by Tourism professionals:
- Development and management of the digital professional image
- Enhancement of the online professional presence and achievement positive reviews.
- Use of Online Targeted Ads to promote products or services
- Time and money management through tailor made ads targeting audiences already interested in these products or services
- Significant increase in number of Online bookings in Accommodation, Transport and Catering
- Local tourism growth

**Keywords:** digital marketing, tourism, social media, Facebook

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