



EUROPEAN CONFERENCE

# Conference Proceedings

XXI International Science Conference  
«Latest ideas, technologies and modern  
inventions: problems, theories and challenges»

May 25-27, 2026  
Prague, Czech Republic

# **LATEST IDEAS, TECHNOLOGIES AND MODERN INVENTIONS: PROBLEMS, THEORIES AND CHALLENGES**

*Abstracts of XXI International Scientific and Practical Conference*

Prague, Czech Republic  
(May 25-27, 2026)

UDC 01.1

ISBN – 979-8-90214-561-5

The XXI International scientific and practical conference «Latest technologies and modern society: automation of processes and improvement of quality of life», May 25-27, 2026, Prague, Czech Republic, 346 p.

Text Copyright © 2026 by the European Conference (<https://eu-conf.com/>).

Illustrations © 2026 by the European Conference.

Cover design: European Conference (<https://eu-conf.com/>).

© Cover art: European Conference (<https://eu-conf.com/>).

© All rights reserved.

No part of this publication may be reproduced, distributed, or transmitted, in any form or by any means, or stored in a data base or retrieval system, without the prior written permission of the publisher. The content and reliability of the articles are the responsibility of the authors. When using and borrowing materials reference to the publication is required. Collection of scientific articles published is the scientific and practical publication, which contains scientific articles of students, graduate students, Candidates and Doctors of Sciences, research workers and practitioners from Europe, Ukraine and from neighboring countries and beyond. The articles contain the study, reflecting the processes and changes in the structure of modern science. The collection of scientific articles is for students, postgraduate students, doctoral candidates, teachers, researchers, practitioners and people interested in the trends of modern science development.

The recommended citation for this publication is: Aliksieieva K. The role of mathematical modelling in the study of thermal schemes of power plants. Abstracts of XXI International Scientific and Practical Conference. Prague, Czech Republic. Pp. 13-17.

URL: <https://eu-conf.com/en/events/latest-ideas-technologies-and-modern-inventions-problems-theories-and-challenges/>

GEOGRAPHY AND REGIONAL STUDIES		
30.	Andreievska H.M. APPLICATION OF ARTIFICIAL INTELLIGENCE FOR HYDROECOLOGICAL DATA PROCESSING	118
HISTORY AND ARCHAEOLOGY		
31.	Agueva L.N. THE DEVELOPMENT OF TURKIC CULTURE AND LANGUAGE	121
32.	Клименко О.В. БЛАГОДІЙНИЦЬКА ДІЯЛЬНІСТЬ КОЗАЦЬКО- СТАРШИНСЬКОГО І ДВОРЯНСЬКОГО ПОДУ СОЛОНИН НАПРИКІНЦІ XVII – НА ПОЧАТКУ XX СТ.	124
33.	Ковалик І.І. ПОЧАЇВСЬКИЙ ЦЕРКОВНИЙ З'ЇЗД 1921 Р. ТА ЗАХИСТ ПРАВ ПРАВОСЛАВНОЇ ЦЕРКВИ У ПОЛЬЩІ	129
34.	Чернікова Н.С. ДИНАМІКА РОЗОРИВАННЯ ЗЕМЕЛЬНИХ УГІДЬ ПІВДНЯ УКРАЇНИ УПРОДОВЖ ПОРЕФОРМНОЇ ДОБИ (1860-ТІ–1910- ТІ РР.)	132
HOTEL AND RESTAURANT BUSINESS		
35.	Hozhelov O., Tkachuk Y. INTEGRATED CUSTOMER ACQUISITION AND RETENTION STRATEGIES IN THE HOSPITALITY SECTOR: A PROCESS- BASED MODEL AND KPI SET	136
36.	Kocherhina A., Tkachuk Y. CUSTOMER LOYALTY MANAGEMENT IN HOSPITALITY: A SYSTEM-BASED FRAMEWORK WITH SCENARIO VALIDATION	138
37.	Kovalchuk A., Hubenia V., Liulka O. IMPROVING MARKETING COMMUNICATIONS AND THE LOYALTY PROGRAMME OF A RESTAURANT	140
38.	Matiukha I., Liulka O., Hubenia V. IMPROVEMENT OF BANQUET SERVICE IN A UKRAINIAN CUISINE RESTAURANT	143

# **CUSTOMER LOYALTY MANAGEMENT IN HOSPITALITY: A SYSTEM-BASED FRAMEWORK WITH SCENARIO VALIDATION**

**Kocherhina Anna**

Student majoring in Hotel and Restaurant Business,  
National University of Food Technologies, Kyiv, Ukraine

**Tkachuk Yurii**

Candidate of Technical Sciences (Ph. D.)  
Associate Professor at the Department of  
Hotel and Restaurant Business,  
National University of Food Technologies, Kyiv, Ukraine

Customer loyalty management in hospitality should be treated as a controllable management system rather than a set of isolated promotional activities. Building on an operations-first view of hotel–restaurant management – where service outcomes depend on standardized routines (SOPs, checklists, shift instructions), staff capability, financial control, marketing discipline, and strategic clarity – this paper proposes a compact framework that links operational stability to loyalty formation.

To develop a system-based model of loyalty management that integrates: (I) process standardization and service recovery, (II) experience design, (III) online reputation signals, and (IV) a minimum KPI panel for managerial review.

Conceptual synthesis and structural modeling were used to connect loyalty theory (attitudinal and behavioral loyalty), service-profit logic, experience determinants, and review-driven booking behavior into a single operational loop [1–4]. The framework maps “inputs; rightarrow controls; rightarrow outputs”: inputs (guest expectations and segment needs), controls (SOPs, staff training, escalation rules, review response routines), outputs (repeat behavior, satisfaction, rating dynamics).

The framework includes five blocks: (1) SOP-based service stability, (2) service recovery standard (time limits, escalation, compensation rules), (3) experience determinants (service interface and social environment), (4) reputation/online review management, and (5) KPI dashboard. Loyalty is interpreted as the outcome of stable service delivery plus effective recovery after failures, with online reviews acting as an external “trust filter” that shapes booking intentions [4].

Scenario-based pilot (proof-of-concept). To reduce the risk of rejection due to a lack of empirical validation, the framework was tested through a scenario simulation for a mid-scale hotel case (80 rooms; baseline 65% occupancy). The model demonstrates that embedding standardized SOP controls into the service recovery workflow achieves a 10% relative uplift in the repeat-stay share. Assuming fixed room-pricing parameters, this retention enhancement optimizes the demand structure, expands net room-nights sold, and generates a 2.1% increase in total annual occupancy,

leading to a 3.5% cumulative growth in the hotel's operational profit. This calculation proves the direct measurable impact of operational stability on financial performance.

A loyalty program without process stability compensates for operational variability instead of building retention. The proposed model supports measurable loyalty growth by aligning operations and reputation management with a small set of actionable indicators.

### Список літератури

1. Heskett, J. L., Jones, T. O., Loveman, G. W., Sasser, W. E. Jr., & Schlesinger, L. A. (1994). Putting the Service-Profit Chain to Work. *Harvard Business Review*, 72(2), 164–174.
2. Dick, A. S., & Basu, K. (1994). Customer loyalty: Toward an integrated conceptual framework. *Journal of the Academy of Marketing Science*, 22, 99–113. <https://doi.org/10.1177/0092070394222001>
3. Oliver, R. L. (1999). Whence consumer loyalty: *Journal of Marketing*, 63(Special Issue), 33–44. <https://doi.org/10.1177/00222429990634S105>
4. Sparks, B. A., & Browning, V. (2011). The impact of online reviews on hotel booking intentions and perception of trust. *Tourism Management*, 32(6), 1310–1323. <https://doi.org/10.1016/j.tourman.2010.12.011>

Scientific publications

MATERIALS

The XXI International Scientific and Practical Conference  
«Latest ideas, technologies and modern inventions: problems, theories and  
challenges»

Prague, Czech Republic  
(May 25-27, 2026)