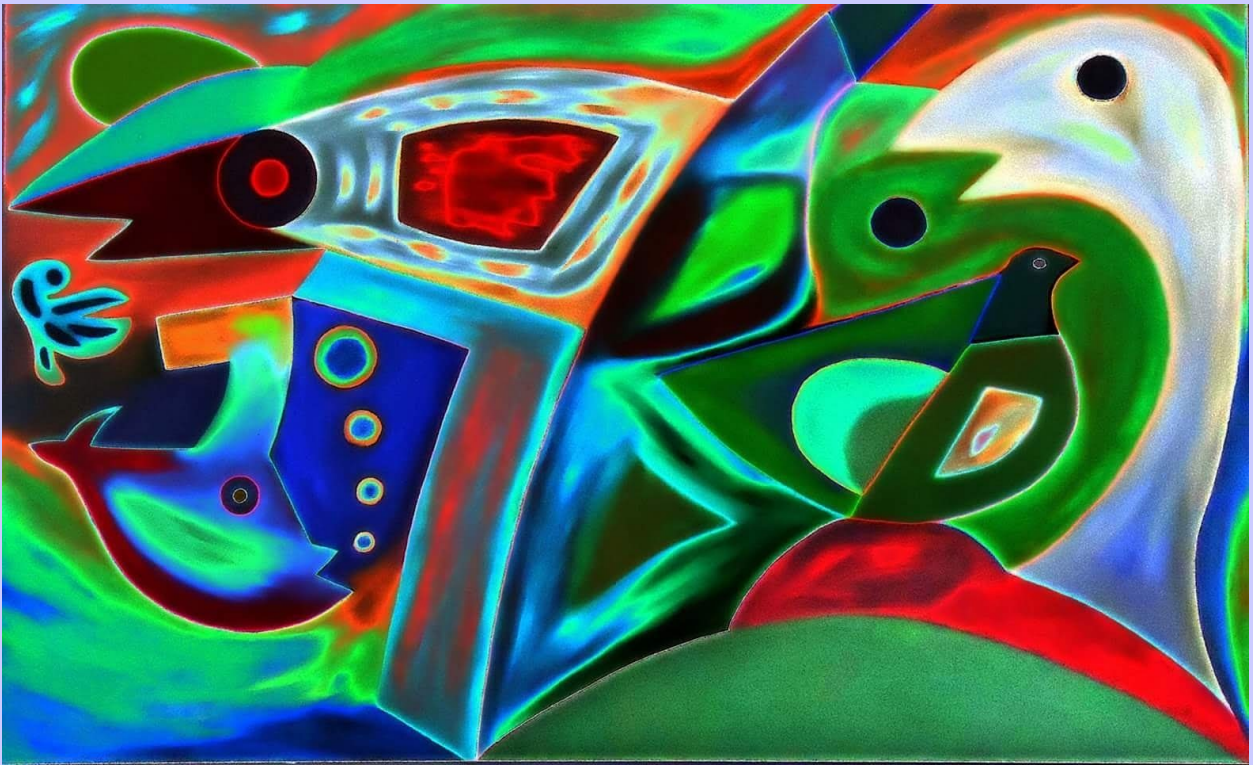


# **Journal of Digital Art & Humanities**



**ISSN 2712-8148**

**Vol.6 Iss.1**

**June 2025**

**Institute of Cited Scientists (ICS)**

## CONTENTS

<b>Artificial Intelligence Implication in Art .....</b>	<b>3</b>
Tatiana Antipova	
<b>Deconstructing the Binaries in Contemporary Cultural Narratives of Authorship .....</b>	<b>14</b>
Zahra Roozafzai	
<b>Ethical Challenges in Explainable AI: A Review on Cultural and Social Bias .....</b>	<b>30</b>
Nipuna Sankalpa Thalpage, Dulanjaya Epa, Sithara Jayawardhana	
<b>Exploring The Impact of Politically Appointed Leadership on HRIS Implementation and Health Practices .....</b>	<b>40</b>
Francis Ampong-Ansah, Michael Ampong	
<b>Management risks in the medical organization .....</b>	<b>53</b>
Marina Erugina, Galina Sazanova, Irana Mirieva, Evgeny Knyazev, Evgeny Kovalev	
<b>The Impact of AI-driven Marketing Personalisation on Consumer Purchase Decisions: A Mixed-Methods Analysis .....</b>	<b>59</b>
Kingsley Ofosu-Ampong, Michael Boateng, Michael Ampong, Julius Adu-Ntim, Francis Ampong-Ansah	

# Management risks in the medical organization

Marina Erugina<sup>1</sup> [0000-0003-4253-5313], Galina Sazanova<sup>1</sup> [0000-0003-3916-8532],  
Irina Mirieva<sup>1</sup> [0000-0002-4510-2188], Evgeny Knyazev<sup>1</sup> [0000-0002-6646-6247],  
Evgeny Kovalev<sup>1</sup> [0000-0002-7725-3036]

<sup>1</sup> Saratov State Medical University named after V. I. Razumovsky, Saratov, Russia

Received 21.04.2025/Revised 28.05.2025/Accepted 28.05.2025/Published 09.06.2025

[https://doi.org/10.33847/2712-8148.6.1\\_5](https://doi.org/10.33847/2712-8148.6.1_5)

**Abstract.** The aim of the study is to rank the risks affecting the activities of a medical organization. A.V. Zavrzhsky's classification was used to identify five risk groups (general economic, professional, market, social and legal). The original questionnaire was developed for analyze the degree of influence of risks on the activities of a medical organization. Heads of the regional medical organizations participated in the study. Nonparametric statistical criteria were used to compare three or more independent samples by a quantitative or ordinal feature. Professional and social risks (14.8% and 16.7% respectively) are less influenced the efficiency of medical organization management. The leading place is occupied by financial risks (25.9%), general economic risks (23.8%) and legal risks (14.6%). A correlation was established between the length of service, position of respondents and risk assessment. The study allowed us to identify key factors influencing the assessment of management risks of a medical organization. The data obtained can be used to develop effective risk management strategies in medical organizations in the region aimed at improving the quality of medical care and improving its effectiveness. In future research, we aim to explore the use of the artificial intelligence (AI) for improving management in medical organisations. AI offers potential benefits like optimised use of resources and better decision-making. But there are also significant risks, including ethics, patient safety, privacy, staff well-being and legal concerns.

**Keywords:** risk management, effective functioning of a medical organization.

## 1. Introduction

The effective operation of medical organizations (MO) depends on the influence of external and internal environmental factors. To minimize their influence in MO, it is necessary to develop a risk management concept. Risk controlling is a rather complex process, the purpose of which is to prevent and reduce possible damage from the impact of risks on the effective functioning of MO and the results of medical activities [6].

## 2. Materials and methods

**The aim of the study** is to rank the risks affecting the activities of a medical organization. To conduct the scientific research, the authors used the typology of risks by A.V. Zavrzhsky, developed by the author to "substantiate approaches to professional medical liability insurance, including 5 risk groups (general economic, professional, market, social and legal)" [3] and corresponding sources of danger.

Based on the classification of risks by A.V. Zavrzhsky and the results of the analysis of data from form 62 "Information on resource provision and provision of

medical care to the population” [8], which were used to verify the sources of danger of financial risks affecting the adoption of management decisions in terms of the rational use of budget and extra-budgetary funds in a medical organization, an original questionnaire was developed in which respondents were asked to assess on a six-point scale the possible risks of a medical organization in the regional healthcare system affecting the quality of medical care, where 6 is the highest risk, 1 is the lowest risk. A sociological survey of 256 individuals (N = 321 people) holding managerial positions in the State Healthcare Institutions of the Saratov Region working in the compulsory medical insurance system was conducted, among whom the bulk were heads of medical organizations (MO) and their deputies (65%). The remaining 35% are heads of departments (26%), chief accountants (8%) and heads of planning and economic departments (1%). The sample population is representative and reflects the general one in terms of quantitative and qualitative indicators and corresponds to the structure of managers in medical organizations of the region, studied according to the data of statistical form No. 30, approved by the order of Rosstat No. 681 dated 12/25/2023. The following methods of data analysis were used: goodness-of-fit test, Kruskal-Wallis H-test and Nemenyi test, Fligner-Killeen test. Permutation ANOVA was implemented with 11,000 data permutations, the distance matrix was constructed in the Hoover's distance mathematical space. All analyzes were carried out using the R programming language (v. 4.3.2) in the RStudio environment. Data reliability was determined at  $p < 0.05$ .

### 3. Results

In the structure of the influence of possible risks on the efficiency of medical care, according to the results of a sociological survey of the administrative and managerial apparatus, financial risks take first place, general business risks take second place, legal risks take third place, and social and professional risks take fourth and fifth place, respectively (Fig. 1).

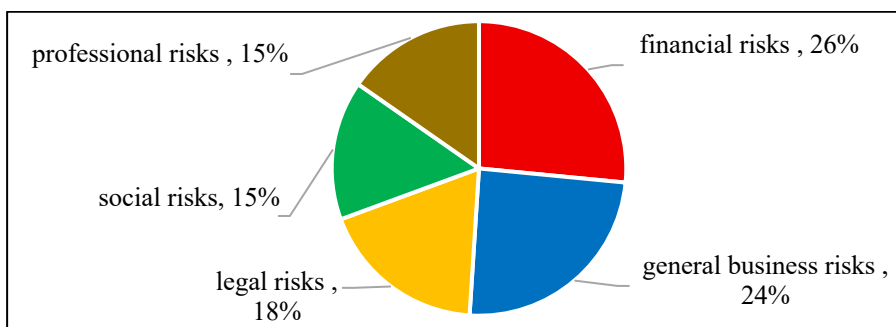


Fig. 1. The structure of possible risks affecting the activities of a medical organization. Source: Authors.

The respondents' position and length of service in their specialty correlate with risk assessment. The factors of position and length of service have the strongest impact on the respondents' assessment of all management risks.

We determined, that chief physicians and their deputies with more than 10 years of experience consider insufficient funding to be the main risk affecting the successful organization of a medical organization in earlier studies [11].

Organizational risks ( $p < 0.001$ ) and contractual liability risks ( $p \leq 0.01$ ) in the structure of general business risks also have a major impact on the activities of the

medical organization, according to more than 80% of heads of medical organizations with more than 6 years of experience.

Managers with work experience from 1 year to 5 years believe that the results of medical activities are most influenced by the risks of providing poor-quality medical services, risks of liability under contracts and risks of legislative regulation. Despite the fact that social risks in the structure of influence on the efficiency of the functioning of the MO took only fourth place, and professional ones – fifth place, 76% of chief physicians, 74% of deputy heads and 45% of heads of departments believe that personnel and demographic risks also have a significant impact on the work processes of the medical organization [11].

There is a reliable decrease in the population, including those living in urban and rural areas ( $p < 0.05$ ) in the Saratov region for the period from 2014 to 2023. Thus, the population of the region decreased by 4%, the urban population - by 2%, the rural population - by 11%. The people of older working age are dominated by region, they account for 28% of the total population of the region; the share of people of working age accounts for 55%, the share of people under working age (under 15 years) - 17%. The presented structure determines the regressive type of the region's population (Fig. 2).

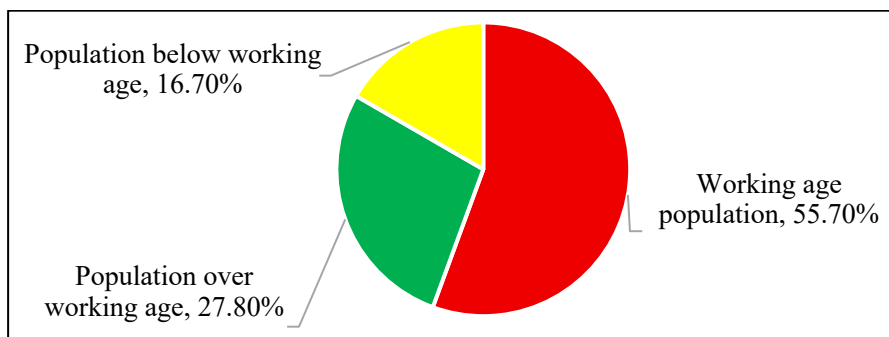


Fig. 2. Population structure of the Saratov region (%). Source: Authors.

The region has seen a statistically significant excess of mortality rates over birth rates, and a negative natural increase has been recorded over the past ten years. Thus, mortality rates for the entire population in the region exceeded birth rates in 2014 by 1.3 times, in 2022 - by 2.1 times. Negative natural increase increased by 2.5 times over the same period in the region.

A comparative analysis of mortality rates showed that in the Saratov region and the Russian Federation over 10 years there has been a significant decrease in overall mortality rates (by 1% and 0.8%, respectively) and infant mortality rates: by 54% and 44%, respectively (Table 1).

Table 1. Dynamics of overall and infant mortality rates in the Saratov region and the Russian Federation for the period from 2013 to 2022 (per 100 thousand population)

Year of observation	General mortality of the population		Infant mortality	
	Russian Federation	Saratov region	Russian Federation	Saratov region
2013	1304	1440	82	70
2014	1305	1410	78	68
2015	1304	1419	65	68

Year of observation	General mortality of the population		Infant mortality	
	Russian Federation	Saratov region	Russian Federation	Saratov region
2016	1289	1403	60	68
2017	1244	1363	56	51
2018	1246	1389	51	47
2019	1225	1373	49	42
2020	1460	1682	45	32
2021	1673	2028	46	48
2022	1294	1428	46	32

The first place is taken by mortality from diseases of the circulatory system, the second place is taken by mortality from malignant neoplasms in the structure of overall mortality, both in the Russian Federation and in the region [12]. The third place is taken by cases of death from external causes, the fourth place is taken by mortality due to diseases of the digestive system. In fifth place are cases of death from diseases of the respiratory system (Fig. 3).

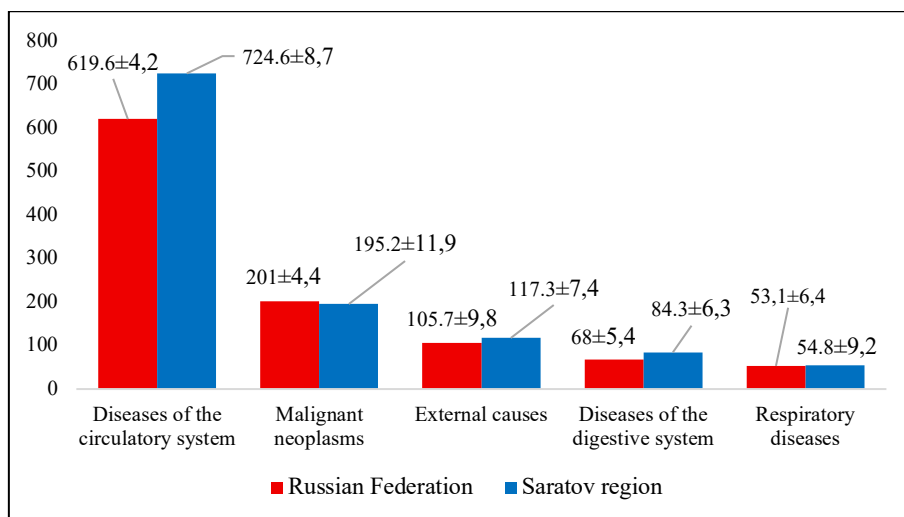


Fig. 3. Structure of causes of general mortality in the Russian Federation and Saratov region (number of cases per 100 thousand people,  $P \pm m$ ). Source: Authors.

The least significant factor was the presence of a PhD degree: it has an insignificant effect on respondents' assessment of the risks of insufficient funding from the constituent entity of the Russian Federation and the municipal budget. The presence of a qualification category factor turns out to be the most influential in respondents' assessment of the risks associated with changes in judicial practice ( $p \leq 0.001$ ).

#### 4. Conclusions

The rational use of resources is a strategic factor for the successful functioning of a medical organization. In this regard, methodological approaches to assessing the effectiveness of their use, taking into account the impact of various risks, are very

important [1]. Risk management is an integrative process, the use of which helps management determine strategic and tactical goals for the development of MO and make appropriate management decisions [10]. Currently, scientific researchers pay sufficient attention to risk research. In published materials, the authors propose "creating an integrated risk management model and "using risk management technologies in the management of medical organizations" [5,7,9]. In accordance with GOST R ISO 31000-2019, "risk management is necessary to forecast the activities of organizations, taking into account possible negative and positive factors affecting the effectiveness of management decision-making" [2,3].

In scientific literature, financial management issues are considered mainly by economists, while MO heads do not pay enough attention to this problem, despite the fact that effective financial management affects the performance of a medical organization [4].

According to the results of our study, when ranking the risks of medical organizations, a correlation was revealed between the risk assessment, the position and length of service of respondents in the specialty. The most significant impact on respondents' assessment of all management risks is exerted by factors of position and length of service. The financial deficit, including insufficient funds from compulsory medical insurance and the regional budget, also affects the efficiency of the MO.

The regressive type of health of the population of the Saratov region, the prevalence of people over working age in the population structure, negative natural growth, high mortality rate of primary disability of the population due to diseases of the circulatory system and malignant neoplasms are related to demographic risks that have a significant impact on the processes of providing medical care to the population of the region [12,13,14].

The creation of a risk management system depending on the degree of their influence on organizational processes will positively influence the adoption of management decisions by heads of medical organizations.

In subsequent research, it is intended to examine the implementation of artificial intelligence (AI) with a view to enhancing management within medical organisations. The potential of AI to enhance management in medical organisations is considerable, with the capacity to optimise resources, enhance decision-making and predict needs. Nevertheless, the risks are considerable and manifold, encompassing ethical considerations, patient safety, privacy, staff well-being, legality, and reputation. The success of such initiatives is contingent upon proactive, responsible, and human-centred implementation. In order to achieve this objective, it is essential to establish robust data governance frameworks, accompanied by clearly defined ethical principles, effective accountability mechanisms, continuous monitoring processes, transparent communication channels, and an unwavering commitment to the core mission of patient care. It is imperative to acknowledge the potential risks associated with this endeavour, as failure and harm can result from ignoring them. However, by implementing a diligent management approach, significant benefits can be realised.

**Acknowledgement.** The article was performed within the framework of the research and development project «Medical and sociological substantiation of the directions of improvement in regional healthcare» (Ministry of Health of the Russian Federation, registration number 121051100308-8 dated April 30, 2021).

## References

1. Kucherenko, V. Z., Eckert, N. V., Organizational and managerial problems of risks in healthcare and medical practice safety [Text] / V. Z. Kucherenko, N. V. Eckert // Bulletin of the Russian Academy of Medical Sciences. - 2012. - No. 3. - Pp. 18-20

2. Zavrazhsky, A. V. Features of risk classification of medical organizations / A. V. Zavrazhsky // *Theoretical and applied economics*. - 2017. - No. 3. - Pp. 90-105.
3. Order of Rosstat dated 26.12.2022 N 979 "On approval of the form of federal statistical observation with instructions for its completion for the organization by the Ministry of Health of the Russian Federation of federal statistical observation in the field of health protection.
4. Aleksandrova, O. A. Reform of Budgetary Institutions: The Opinion of Patients and Doctors / O. A. Aleksandrova // *Humanities. Bulletin of the Financial University*. - 2017. - Vol. 7, No. 1(25). - Pp. 54-63.
5. Syzdykova, A. M. Risk management in the healthcare system / A. M. Syzdykova, A. K. Turgambayeva, T. S. Karibekov // *Clinical Medicine of Kazakhstan*. 2014, 3(33), 13-16.
6. Knyazuk, N. F. Modeling an integrated risk management system in a medical organization / N. F. Knyazuk // *Medical Almanac*. 2011, 2(15), 9-13.
7. Ozerova, E. I. Management of medical error risk / E. I. Ozerova // *New science: Experience, traditions, innovations*. - 2016. - No. 4-1(77). - Pp. 128-130.
8. Application of risk management technologies in the healthcare system / I. S. Kitsul, B. S. Balkhanov, N. K. Badmaeva [et al.] // *Healthcare Manager*. - 2012. - No. 10. - Pp. 6-14.
9. GOST R ISO 31000—2019 Risk Management. Principles and Guidelines, Moscow, Standartinform, 2020 – 19 pages
10. Quality of medical care and issues of financial management (review) / G. Yu. Sazanova, I. D. Mirieva, M. V. Erugina, A. D. Ponomarev // *Saratov Scientific and Medical Journal*. - 2021. - Vol. 17, No. 4. - Pp. 751-754.
11. Hierarchy of risks of a medical organization / I. D. Mirieva, G. Yu. Sazanova, M. V. Erugina [et al.] // *Problems of social hygiene, health care and history of medicine*. - 2025. - Vol. 33, No. 2. - P. 259-262. DOI: 10.32687/0869-866X-2025-33-2-259-262.
12. Erugina M., Sazanova G., Dolgova E., Tuhtarov B., Nizomov B. Demographic characteristics as effectiveness indicators of the national health care systems. *Journal of Digital Art & Humanities*. 4(2), 16-21, (2023). <https://doi.org/10.33847/2712-8149.4.2.2>.
13. Erugina, M., Sazanova, G., Krom, I., Dolgova, E., Eremina, M. (2025). Comparative Analysis of the Urban and Rural Populations' Major Demographic Characteristics in the Russian Federation and the Republic of Uzbekistan. In: Antipova, T. (eds) *Digital Technology Platforms and Deployment. Information Systems Engineering and Management*, vol 36. Springer, Cham. [https://doi.org/10.1007/978-3-031-86547-3\\_6](https://doi.org/10.1007/978-3-031-86547-3_6)
14. Erugina, M., Tuhtarov, B., Sazanova, G., Nizomov, B., Dolgova, E. (2025). Russia and Uzbekistan Population Health: Comparative Results of Morbidity, Mortality and Disability Rate Research. In: Antipova, T. (eds) *Digital Technology Platforms and Deployment. Information Systems Engineering and Management*, vol 36. Springer, Cham. [https://doi.org/10.1007/978-3-031-86547-3\\_7](https://doi.org/10.1007/978-3-031-86547-3_7).

**Journal of Digital Art & Humanities (JDAH)** has **ISSN 2712-8148** registered at the ISSN Centre in Cyprus. Each published article has been assigned by DOI, ORCID. JDAH indexed by ProQuest, Dimensions.

### **Aims and Objectives**

Published online by Institute of Cited Scientists (ICS), Cyprus, two times a year since 2020, Journal of Digital Art & Humanities (JDAH) is an international peer-reviewed journal which aims at the latest ideas, innovations, trends, experiences and concerns in the field of the arts & humanities. Our journal bridges the humanities, artistic, and scientific disciplines. It is a nexus for information exchange among academia and industry addressing theory, criticism, and practice.

**The main goal** of this journal is to efficiently disseminate original findings generated by human brain with utilizing modern information/digital technologies with multidisciplinary approach.

**Topics discussed** in this journal include the following: Artificial Intelligence in Art, Culture, and Marketing; Digital Technology in Health Care.

The views, opinions and data expressed in any publication reflect only those of the individual author or contributor(s) and not those of ICS and/or the publisher.

ICS and/or the editors disclaim responsibility for any injury to people or property resulting from any ideas, methods, instructions or products referred to in the journal content.

## **Editorial Board**

**Editor-in-Chief** Tatiana Antipova, Institute of Cited Scientists, Cyprus

<https://orcid.org/0000-0002-0872-4965>

### **Editors**

Achmad Nurmandi, Universitas Muhammadiyah Yogyakarta, Indonesia

<https://orcid.org/0000-0002-6730-0273>

Ahamad Tarmizi Azizan, Asian Southeast Digital Arts Association, Malaysia

<https://orcid.org/0000-0003-4361-147X>

Antonio Donizeti da Cruz, Universidade Estadual do Oeste do Paraná, Letras, Brazil

<https://orcid.org/0000-0002-4672-7542>

Ari Riswanto, Universitas Pendidikan, Bandung, Indonesia

<https://orcid.org/0000-0002-0924-7996>

Florin Popentiu-Vlădescu, "Elena Teodorini" Academy of Arts and Sciences, London, UK

<https://orcid.org/0000-0002-0857-117X>

Jon W. Beard, Iowa State University, Ames, US

<https://orcid.org/0000-0002-6274-6567>

Indra Bastian, Universitas Gadjah Mada, Yogyakarta, Indonesia

<https://orcid.org/0000-0003-4658-8690>

Indrawati Yuhertiana, Universitas Pembangunan Nasional Veteran Jatim, Surabaya, Indonesia

<https://orcid.org/0000-0002-1613-1692>

Narcisa Roxana Moșteanu, American University of Malta, Malta

<https://orcid.org/0000-0001-5905-8600>

Narmina Rahimli, Impact Consulting, Hong Kong, China

<https://orcid.org/0000-0002-4755-4604>

Patricia Ioana Riurean, Smarttech247, Bucharest, Romania

<https://orcid.org/0000-0003-1683-0052>

Rashmi Gujrati, Tecnia Institute of Advanced studies, New Delhi, India

<https://orcid.org/0000-0002-1128-3742>

## **Contact information**

**Journal URL:** <https://ics.events/journal-of-digital-art-humanities/>

**Email:** [conf@ics.events](mailto:conf@ics.events)

Printed online from the original layout under the imprint at:  
1, Vlachou, Nicosia, The Republic of Cyprus

The picture on JDAH cover was painted by Antonio Donizeti da Cruz, Brazil.