Bulletin of the Transilvania University of Braşov
Series V: Economic Sciences • Vol. 18(67) No. 2 - 2025
https://doi.org/10.31926/but.es.2025.18.67.2.9

BLENDING THE REAL AND THE VIRTUAL: THEORETICAL INSIGHTS INTO AUGMENTED REALITY IN TOURISM PROMOTION

A. KOVÁCS[1] A. ISPAS[2]

Abstract: *This study investigates how Augmented Reality (AR) contributes to tourism promotion, with attention to its development, defining features, and practical uses. AR is understood as a technology that overlays digital elements onto real-world-settings, creating more engaging experiences for visitors. The study compares traditional and digital promotion methods, highlighting the added value created by AR through emotional engagement and active participation. Best practice examples, including AR in museums, historical reconstructions, and mobile guides, illustrate its role in providing authentic and educational experiences. Findings show that AR increases tourist satisfaction, supports revisits, and strengthens destination competitiveness. The paper concludes that AR is becoming essential in tourism promotion, driving innovation and sustainable development in the industry.*

Key words: *Augmented Reality, enhancing tourist heritage, interactive experiences, tourist engagement.*

1. Introduction

Tourism is a dynamic industry that increasingly integrates innovative technologies to enhance visitor experiences and promote destinations. In this context, Augmented Reality (AR) stands out as an innovative technology that reshapes the way tourism experiences are delivered, combining virtual elements with real-world environments to offer enriched and interactive experiences, allowing tourists to engage actively with their surroundings, while Virtual Reality isolates users within a completely simulated space (Flavián et al., 2018). The evolution of AR - from Ivan Sutherland's early prototypes to modern applications such as Google Glass, Pokémon Go, and mobile AR platforms - illustrates its growing relevance in various fields, including tourism. AR enables destinations to provide authentic, educational, and emotionally engaging experiences, which traditional and even some digital promotion methods cannot fully

[1] Transilvania University of Braşov, adrienn.kovacs@unitbv.ro
[2] Transilvania University of Braşov, ispasana@unitbv.ro, https://orcid.org/0000-0002-8677-6795.

achieve. This study explores AR's role in tourism promotion, its characteristics, applications, and its impact on tourist engagement and destination competitiveness.

Therefore, this study aims to explore how AR can contribute to promoting and enhancing local tourist heritage in an interactive and accessible way, particularly for younger generations. Specifically, this study examines the evolution and key characteristics of AR, analyses its role in comparison with traditional and digital tourism promotion methods, and identifies best practices that demonstrate its impact on tourist experiences.

This study seeks to answer the following central question: "How does AR enhance the effectiveness of tourism promotion and influence tourists' engagement with destinations?". In pursuing this aim, the research focuses on several specific objectives: to analyse the evolution and defining characteristics of AR in the context of tourism; to compare AR-based promotion methods with traditional and digital approaches; to identify best practice examples that demonstrate AR's capacity to enhance tourist engagement and destination competitiveness; and to evaluate the implications of AR adoption for sustainable and innovative tourism development.

Building on these objectives and the existing body of literature, the study is guided by several working hypotheses. It is assumed that (H1) Augmented Reality significantly enhances tourist engagement compared to traditional and standard digital promotion tools; (H2) The integration of AR in tourism promotion contributes to higher destination competitiveness and visitor satisfaction; and (H3) The educational and experiential value of AR applications encourages repeat visitation and strengthens the emotional connection between tourists and destinations.

This study adopts a qualitative approach, combining a comprehensive review of literature with the analysis of best practice examples of AR applications in tourism. Key materials include academic articles, reports, and case studies on AR in museums, historical reconstructions, mobile guides, and tourism-focused games. By examining these sources, the study evaluates the evolution, applications, and impact of AR on tourist experiences, engagement, and destination promotion.

This paper is structured as follows:

Section 1 – Introduction - sets out the aims, objectives, and scope of the research.

Section 2 – Literature review - examines the foundations, evolution, and defining features of augmented reality, with a particular focus on its applications in tourism.

Section 3 – Methodology - presents the qualitative research approach adopted, combining a review of academic literature with the analysis of best practice examples of AR in museums, historical reconstructions, mobile guides, and tourism-focused games.

Section 4 – Results - discusses traditional, digital, and AR-based strategies, highlighting their influence on visitor engagement and destination competitiveness.

Section 5 – Conclusions - brings together the key findings, underlining the contribution of AR to authentic tourist experiences, repeat visits, and the sustainable development of tourism.

2. Literature Review

2.1. The fundamentals of augmented reality

At present, technology and digitalization are essential in many fields, influencing society and especially today's youth, who were already born into the digital era. AR is a tool that combines virtual elements with real elements from the physical environment, thus helping to improve the experience of digital users in any field.

AR is a relatively new technology, which has evolved over time. In the following, some aspects of this evolution will be presented:

- 1968 – Ivan Sutherland: in collaboration with Bob Sproull, developed the first prototype of an AR system. This system consisted of an optical head-mounted display, and a ceiling-mounted tracking setup, connected to a computer and supporting hardware. This system generated three-dimensional images that overlapped the real world, for example with maps, walls, or the keys of a typewriter (Billinghurst, 2015).
- 1990 – Tom Caudell: together with his colleague David Mizell, both employees of Boeing (an aircraft manufacturing company), invented glasses designed to replace the usual panels with instructions for wiring each aircraft, to make the workers more efficient. These glasses could be worn by each worker and overlaid the position of the cables for each individual aircraft, projecting them onto panels, which thus became multifunctional and reusable, because the glasses contained the exact information (Mealy, 2018).
- 1992 – Louis Rosenberg: invented "Virtual Fixtures", which aimed at improving human performance, dexterity, and working speed, hence the name "fixtures". An example of using this system comes from the medical field, where it assisted doctors during surgical interventions by projecting a straight line on the patient's body where the doctor had to make an incision, thus making the procedure much safer and faster than if it had been done freehand (Rosenberg, 2021).
- 2000 – Kato Hirokazu: developed the ARToolKit program, an AR tracking library that used physical markers over which virtual images were superimposed. This program was capable of precisely aligning the virtual and real elements with the help of camera position tracking techniques. The physical markers were square, printed images in black and white. This program is still used today (Billinghurst, 2015).
- 2008 – Mobilizy company: the emergence and development of smartphones led to the launch of the Wikitude application, which provided users with information about surrounding points of interest, adding virtual labels with important information over a live video (Billinghurst, 2015).
- 2012 – Google company: launched Google Glass, a pair of smart glasses capable of displaying real-time information, also accessible on mobile phones, but in a hands-free manner and without obstructing the user's view. For example, these glasses could be used as a GPS, showing the route directly on the glasses' display without the user needing to look at their phone and without disrupting their vision. These glasses are still present on today's market, with more advanced technology (Gowdham and Balasubramanian, 2015).

- 2016 – Niantic company: launched the mobile game Pokémon Go, which, already two months after its release, was downloaded more than 500 million times, and which combines virtual elements with those of reality, thus being considered a game that uses AR technologies. Pokémon Go uses GPS to place virtual creatures called Pokémon in different locations, encouraging players to explore nearby cities and beyond to catch the virtual creatures, using the smartphone camera where these creatures appear on the screen as if they were present in the real location (Hamari et al., 2018)
- 2017 – Apple and Google companies: the ARKit platform was developed by Apple and the ARCore platform by Google, which allowed the development of applications for iOS and Android devices, respectively. These platforms use the phone's camera to integrate virtual elements into the real space. For example, the filters within the Snapchat application, which, by using the phone's camera, could attach different masks to the user's face – such as the long-eared dog that would stick out its tongue when the user did, moving together with the user's head.
- 2017 – IKEA company: launched the application called IKEA Place, which was designed to reduce the stress of furniture and home decoration shoppers. The application uses ARKit and ARCore technologies and allows users to place virtual replicas of the desired furniture or decorations in their real home, to see if they fit their preferences before making the purchase and arranging delivery (Ozturkcan, 2021).

AR is part of the Reality–Virtuality Continuum, which classifies the multitude of realities. Thus, there are Real Environments (RE), which refer to videos of real spaces without the intervention of digital elements. The other extreme of this continuum is Virtual Environments (VE), which refers to a completely virtual environment. This extreme also includes Virtual Reality (VR). Between these extremes lies Mixed Reality (MR), which blends virtual elements with the real world. MR includes two subcategories: Augmented Reality (AR) and Augmented Virtuality (AV). AR uses the user's surrounding physical and real environment, over which it adds virtual elements, while augmented virtuality works inversely, using a virtual environment over which real elements are added (Flavián et al., 2018).

The most used realities are virtual reality (VR) and augmented reality (AR), which differ in that VR completely excludes the real environment, while AR remains in the real space, which is necessary, and over which virtual elements are superimposed (Forgó et al., 2024). More broadly, virtual reality is a space created with the help of a computer, which, although it may appear real to the user, is entirely virtual, and requires various tools to be accessed and used, such as virtual glasses or gloves, or even special controllers for this purpose (Petzné–Tóth and Csiszár, 2022). On the other hand, AR requires traveling to the physical environment to benefit from its virtual component, because in this case it is entirely important that there is a real and physical base over which different virtual elements are superimposed.

Feiner, Macintyre, and Seligmann stated that many people enjoy experiencing a world that does not exist or exists in a different time or place, as in the case of virtual reality; however, there are situations when interaction with the surrounding real world is still

desired. Thus, they further defined AR, which can make this possible by presenting a virtual world that, instead of replacing the real world, enriches it (Feiner et al., 1993).

Azuma (1997) outlined three characteristics of AR systems, which were further explained by Parveau and Adda in 2018:

a) Combination of the real and the virtual: this is considered the most important element of AR, as it allows the user to be at the centre of their experience. At the same time, this element is what differentiates AR from VR, being a system that overlays virtual elements onto the physical and real environment.
b) Real-time interactivity: once the physical space is prepared so that the user can remain at the centre of the experience, interactions with virtual elements must be possible as naturally and quickly as possible, without the need for an intermediary.
c) 3D registration: the virtual object overlaid onto the real environment must be accurately aligned in both space and time. This ensures it is correctly positioned relative to the user's orientation, the surrounding environment, and other nearby objects.

AR systems are composed of two primary components: hardware and software. The hardware aspect can be further divided into three categories: input devices, which allow users to interact with the system through gestures, sensor-embedded gloves, eye movements, speech, and similar methods; sensors, which enable the determination of the position of the user or the object in question, and are essential for aligning the digital and physical worlds; and displays, such as monitors or wearable devices, like glasses, gloves etc., which provide additional information during the user's activity. The software component was created by Apple and Google when they developed ARKit and ARCore, the platforms mentioned earlier in the evolution of AR (Arena et al., 2022).

2.2. Defining augmented reality in tourism

AR can be considered a useful tool for supporting tourism development of destinations and countries by providing tourists with exceptional experiences, thanks to its essential characteristic: the combination of the real environment with virtual elements.

In the tourism industry, AR is a new and innovative way for tourists to explore unfamiliar surroundings, offering numerous opportunities to add value to the real elements around them (Cranmer et al., 2020). The ability of AR to integrate virtual elements into the physical environment and the experience it provides will contribute to the future development of the hospitality and tourism industry, becoming even a necessity in creating added value for visitors (Vujovic et al., 2021).

Tourists who use AR when visiting a tourist destination can gain valuable experiences without the need for a tour guide to provide them with important information about the attractions in the area and beyond, thus increasing positive attitudes toward the destination and even enhancing the desire to revisit (Chung et al., 2015). At the same time, there are three aspects that encourage tourists to use AR, like technology readiness, which refers to the fact that people already have a general mental preparedness to use technology, followed by the second aspect, visual attractiveness,

referring to the fact that valuable information presented in a more appealing way can be a decisive element for the tourists' final experience, and last but not least, the situational factor, which is related to intermediate conditions, that is, the external environment, which must provide the opportunity for activities to take place optimally (Chung et al., 2015).

3. Methodology

This study adopts a qualitative and exploratory research approach, designed to understand how AR contributes to tourism promotion and destination competitiveness. The methodology is based on two complementary components:

1. Comprehensive literature review - focusing on academic articles, reports, and relevant case studies addressing AR in tourism, including museums, heritage sites, historical reconstructions, mobile applications and guides and tourism-focused games based on AR. This step made it possible to identify the key features of AR, theoretical frameworks, its evolution, and existing research gaps, providing the foundation for understanding AR's potential to enhance tourist engagement.
2. Analysis of best practice examples of AR applications in tourism - exposed examples that were selected to represent different contexts of AR utilization and allowed for a comparison of how AR has been implemented across various environments. Particular attention was given to identifying the benefits AR brings to tourist satisfaction, emotional engagement, and destination promotion but also the challenges.

The research process followed the logic of qualitative content analysis, where data were collected from secondary sources (scientific literature, reports, websites, and case studies) and analysed thematically. The focus was on identifying patterns related to AR's impact on tourist experience, destination promotion, and sustainable development.

Ethical considerations were maintained by citing all sources and ensuring objectivity in interpretation. The limitations of this qualitative approach concern the lack of quantitative measurement; however, the chosen design provides depth of understanding necessary for theoretical and conceptual advancement.

4. Results

Tourism is growing rapidly, with various countries competing to attract as many tourists as possible, and promotion plays a very important role in this (Mallick, 2023). The most important factor for the tourism industry is the return of tourists to destinations they have already visited, a factor that depends not only on the unique attractions of the respective destination but is also largely influenced by consistently maximized promotions (Hermawan et al., 2022). Promotion in the tourism industry is not only responsible for attracting tourists but also for developing quality goods and services that satisfy visitors' needs and desires, and thus can be considered more than just promotion - specifically, brand management and the identity of the tourist

destination - improving it through strategies that can develop a strong image of the destination (Liberato et al., 2025). Additionally, the purpose of promotion is to enhance the welfare of the local community by providing jobs to manage tourist destinations (Hermawan et al., 2022).

From the perspective of promotion methods, these can be divided into traditional and digital methods. The most used traditional promotion methods are the following (Plăiaș and Cotîrlea, 2013):

- Advertising: provides the most persuasive possible message by combining audio-visual stimuli, thus influencing the perception of the country's image. This category also includes print advertising (brochures, leaflets, posters, business cards, etc.), direct advertising (catalogues, materials sent by mail, etc.), and advertising via radio or television.
- Personal selling: is a form of personal interaction that allows development. This category includes, for example, fairs and exhibitions.
- Public relations: are based on interactive communication between the enterprise and significant clients, informing them as well as listening to them, for example through conferences, speeches, special events, seminars, etc. (Ispas and Candrea, 2016).
- Sales promotion: is based on techniques that stimulate and increase the sales of products and services. These are mainly used to attract investments, and examples of their use include bonuses, discounts, gifts, lotteries, raffles etc.

In the tourism industry and in a globalized world, the most interesting and growing form of promotion is digital promotion, whose growth is due to the increasing possession of technological devices, which changes the way tourism services are perceived, consumed, and accessed (Chamboko-Mpotaringa and Tichaawa, 2021). Due to digitalization, tourism has entered the digital era (Happ and Ivancso–Horvath, 2018), and in this era, tourism is independent of time, place, and people, as it can operate with anyone, anywhere, and anytime (Kabia and Srinivaasan, 2020). The most used digital promotion methods are the following (Chamboko-Mpotaringa and Tichaawa, 2021):

- Websites: are considered sources that provide reliable information if they are regularly monitored, and their purpose is to maintain constant and direct interaction with clients, thus eliminating intermediaries.
- Social media: is considered the most favourable for current promotion, because they reach many clients at minimal costs, and at the same time, the distribution of information is convenient, efficient, and fast (Mallick, 2023).
- Chatbots: are conversational systems developed to generate interactions like human ones, thus considered virtual agents. This technology emerged because tourists, over time, developed a need for immediate satisfaction, and chatbots can provide reliable real-time responses about anything, such as finding restaurants, booking hotels or other establishments, and even purchasing tourist goods.
- Mobile travel applications: provide cost-effective options and can include various functions, such as itinerary generation, weather forecasts, language translation, currency conversion etc.

- Tourism blogging and vlogging: refer to writing a blog or filming a vlog (video) about travel experiences. Potential tourists rely heavily on these, as they are based on people's personal experiences that can help them make travel decisions.
- VR platforms and applications: help provide information and images as realistic as possible about different areas of the world, without the need for the tourist to travel from one place to another, exclusively using virtual reality. For example, Romania promoted its capital, Bucharest, through the Second Life platform, which presents virtual replicas of the buildings in the capital and allows interaction between people from different parts of the world (Plăiaș and Cotîrlea, 2013).

Effective promotion requires a combination of both digital and traditional methods to enhance an organization's image and identity (Plăiaș and Cotîrlea, 2013). Within digital promotion, AR has gained significant attention in recent years, largely due to the widespread adoption of mobile devices equipped with cameras, GPS (Global Positioning System), and internet connectivity. AR can create an interactive environment where tourists who are not familiar with a certain area can explore unknown places without the need for a tour guide, thus building a different type of personal experience (Jung et al., 2015). In promotion, AR can create an emotional interaction due to the connection between the company and tourists, something that cannot be said about traditional promotion methods, such as brochures (Cranmer et al., 2020). Technological innovation has become a crucial factor in how tourism destinations present themselves and stay connected with their audiences.

Traditional methods of promotion are increasingly supplemented by digital tools that allow for richer and more interactive communication with travellers. According to Ivasciuc (2020), the combination of AR offers new ways for the hospitality sector to remain linked with tourists, particularly during disruptive periods like the COVID-19 pandemic. Beyond simply responding to health and safety requirements, AR creates opportunities for personalization, interaction, and emotional involvement, which help destinations maintain appeal and competitiveness even when direct travel is limited. In this way, AR is not just a novelty but a valuable promotional resource that supports meaningful visitor relationships and enhances long-term market positioning (Ivasciuc, 2020).

The contemporary tourist no longer wishes to be passive but has new aspirations, namely to become one with the visited area and be part of the experience, thus demanding active participation, multisensory stimulation, information, and entertainment (Neuburger and Egger, 2017), and chooses travel agencies that can offer experiences in AR, even if these consist of simply downloading applications onto mobile phones (Pencarelli, 2019).

To justify the above, several examples of strategies for effective application of AR for promoting tourist attractions will be presented:

- "Augmenting Rothko", "Van Gogh re-created", and the Sant Climent de Taüll church: used AR to conserve, restore, and digitally present original artworks that had been damaged, lost their colours, or were lost over the years, thus allowing tourists to examine the artworks in their original conditions, providing authentic as well as educational experiences (Ilhan and Celtek, 2016);

- "Ivie": is a tourist guide application for the city of Vienna, capable of guiding users to special locations with navigation and providing relevant information about nearby attractions and places according to the user's preferences (Han et al., 2014). This application not only provides information about the famous tourist attractions of Vienna, but also about other areas, possibly even unknown to locals, yet worth visiting, such as unusual museums, parks etc. (Wien.info, n.d.);
- "TimeWarp" and "Urban Sleuth": are two game applications that use AR, actively engaging their users by reconstructing historical events or buildings, while also offering the possibility to participate in missions within the city or destination (Tom Dieck and Jung, 2015). The "Urban Sleuth" application can transform the user's phone into a spy device, where they receive various missions to solve, and it also allows gameplay from the comfort of home without travelling to the respective location. However, the application is designed to explore the city, finding clues and solving mysteries, providing an authentic as well as educational experience (Urban Sleuth, n.d.).
- The "Characworld" theme park: is located on Jeju Island, South Korea, since 2011, and offers many leisure opportunities, such as video games, illusion studios etc., even projecting an interactive AR experience. This consists of an exhibition hall where famous virtual characters from movies and cartoons are overlaid onto the real environment using markers, specifically a book, which activates a 3D image that moves with the movement of the book and narrates original legends from Jeju Island (Jung et al., 2015).
- "A la recherche de l'empreinte perdue": is an AR-based game, which in English is called "In search of the lost footprint", and requires a phone and a logbook (used to record observations and discoveries), with which the Landes Lanvaux region in France can be explored. This game involves searching for clues through 26 puzzles located at different points in the region, as well as with the help of locals who can assist in finding these points, thus discovering events, history, specific architecture, traditional recipes, and much more, enhancing the region's attractiveness through the experience provided (Candrea and Nechita, 2015).

These successful methods for applying AR for promoting attractions, as well as the specialized literature used to define all the important elements of this study, show that AR is used in tourism and beyond, and will continue to be, providing benefits across all industries through interactive and authentic experiences, which have become a necessity for contemporary tourists and people.

5. Conclusion

AR has become an essential tool in modern tourism promotion, offering interactive and immersive experiences that enhance visitor satisfaction. AR applications - ranging from museum exhibits and historical reconstructions to mobile guides and AR-based games - demonstrate their ability to provide authentic, educational, and emotionally engaging experiences. Compared to traditional methods, AR creates stronger

connections between tourists and destinations, encourages revisits, and strengthens competitiveness. The integration of AR into tourism promotion represents a shift toward innovative, sustainable, and digitally enhanced strategies, responding to contemporary tourists' desire for active participation, multisensory engagement, and personalized experiences. Continued development and adoption of AR technologies are crucial for the growth and modernization of the tourism industry.

This perspective is consistent with the conclusions of Ivasciuc (2020), who emphasizes that the future growth of tourism will rely heavily on the adoption of advanced digital technologies such as AR. By facilitating stronger connections between service providers and tourists, AR contributes not only to competitiveness during challenging times but also to building sustainable practices and trust, reinforcing its status as a vital element in the advancement of tourism promotion (Ivasciuc, 2020).

References

Arena, F., Colotta, M., Pau, G. and Termine, F. 2022. An overview of augmented reality. *Computers*, 11(28), pp.1–15.

Azuma, R.T. 1997. A survey of augmented reality. *Teleoperators and Virtual Environments*, 6(4), pp.355–385.

Billinghurst, M., Clark, A. and Lee, G. 2015. A survey of augmented reality. *Foundations and Trends in Human-Computer Interaction*, 8(2–3), pp.73–272.

Candrea, A.N. and Nechita, F. (2015). *Interpretarea și promovarea patrimoniului cultural din muzee*. Brașov: Editura Universității Transilvania din Brașov.

Chamboko-Mpotaringa, M. and Tichaawa, T.M. 2021. Tourism digital marketing tools and views on future trends: A systematic review of literature. *African Journal of Hospitality, Tourism and Leisure*, 10(2), pp.712–726.

Chung, N., Han, H. and Joun, Y. 2015. Tourists' intention to visit a destination: The role of augmented reality (AR) application for a heritage site. *Computers in Human Behavior*, 50, pp.588–599.

Cranmer, E.E., Tom Dieck, M.C. and Fountoulaki, P. 2020. Exploring the value of augmented reality for tourism. *Tourism Management Perspectives*, 35, pp.1–9.

Feiner, S., Macintyre, B. and Seligmann, D. 1993. Knowledge-based augmented reality. *Communications of the ACM*, 36(7), pp.53–62.

Flavián, C., Ibanez-Sanchez, S. and Orus, C. 2019. The impact of virtual, augmented and mixed reality technologies on the customer experience. *Journal of Business Research*, 100, pp.547–560.

Forgó, Z., Gál, K., Pásztor, J. and Egyed-Faluvégi, E. 2024. Kiterjesztett valóság a műszaki oktatásban. *Nemzetközi Gépészeti Konferencia*, 32, pp.118–123.

Gowdham, G.P. and Balasubramanian, N. 2015. A review on the Google Glass technology. *International Journal of Emerging Technology in Computer Science & Electronics*, 12(4), pp.263–269.

Hamari, J., Malik, A., Koski, J. and Johri, A. 2018. Uses and gratifications of Pokémon Go: Why do people play mobile location-based augmented reality games. *International Journal of Human–Computer Interaction*, 35(3), pp.1–16.

Han, D., Jung, T. and Gibson, A. 2014. Implementing augmented reality (AR) in tourism. In: *Information and Communication Technologies in Tourism 2014*. Springer, pp.511–523.

Happ, E. and Ivancso-Horvath, Zs. 2018. Digital tourism is the challenge of future – A new approach to tourism. *Knowledge Horizons – Economics*, 10(2), pp.9–16.

Hermawan, H., Santosa, Wijayanti, A., Nurfitriana, C.N., Saputra, A.D. and Sinangjoyo, N.J. 2022. The significance of tourism attraction and social media promotion on the interest of return visit. *Tourism and Hospitality International Journal*, 18(1), pp.60–83.

Ilhan, I. and Celtek, E. 2016. Mobile marketing: Usage of augmented reality in tourism. *Gaziantep University Journal of Social Sciences*, 15(2), pp.581–599.

Ispas, A. and Candrea, A.N. 2016. *Marketing turistic*. Brașov: Editura Universității Transilvania din Brașov.

Ivasciuc, I.S., 2020. Augmented Reality and Facial Recognition Technologies. Building Bridges Between the Hospitality Industry and Tourists During Pandemic. *Bulletin of the Transilvania University of Brașov, Series V: Economic Sciences*, 13(62), no.2, pp.75-92 doi:10.31926/but.es.2020.13.62.2.8

Jung, T., Chung, N. and Leue, M. 2015. The determinants of recommendations to use augmented reality technologies – The case of a Korean theme park. *Tourism Management*, 49, pp.75–86.

Kabia, S.K. and Srinivasan, G. 2020. Role of smartphones in destination promotion and its impact on travel experience. *International Journal of Hospitality & Tourism Systems*, 13(1), pp.22–29.

Liberato, M.M., Vieira, L.V.L., Ferreira, F. and Neto, J.B. 2025. Marketing, competitiveness and promotion of tourist attractions. In: *Education Excellence and Innovation Management*, pp.14721–14729.

Mallick, S.U. 2023. Promoting tourism through digital marketing. *The American Journal of Management and Economics Innovations*, 5(10), pp.62–85.

Mealy, P. 2018. *Virtual & Augmented Reality*. Hoboken: John Wiley & Sons.

Neuburger, L. and Egger, R. 2017. An afternoon at the museum: Through the lens of augmented reality. In: *Information and Communication Technologies in Tourism 2017*. Springer, pp.241–254.

Ozturkcan, S. 2021. Service innovation: Using augmented reality in the IKEA Place app. *Journal of Information Technology Teaching Cases*, 11(1), pp.8–13.

Parveau, M. and Adda, M. 2018. 3iVClass: A new classification method for virtual, augmented and mixed realities. *Procedia Computer Science*, 141, pp.263–270.

Pencarelli, T. 2019. The digital revolution in the travel and tourism industry. *Information Technology & Tourism*, 22, pp.455–476.

Petzné Tóth, Sz. and Csiszár, V. 2022. A tudástranszfer újszerű lehetőségei a virtuális și kiterjesztett valóság segítségével. *Közösségi Kapcsolódások*, 2, pp.49–61.

Plăiaș, I. and Cotîrlea, D.A. 2013. Promotion of Romania's image and identity: Traditional and modern promotion techniques and methods. In: *International Conference "Marketing – from Information to Decision"*, 6, pp.210–222.

Rosenberg, L. 2021. *Augmented Reality: Reflections at Thirty Years*. Cham: Springer International Publishing.

Tom Dieck, M.C. and Jung, T. 2015. A theoretical model of mobile augmented reality acceptance in urban heritage tourism. *Current Issues in Tourism*, 2, pp.154–174.

Vujovic, S., Radenovic, T. and Vujovic, T. 2021. The application of augmented reality in promoting hotels and tourist attractions of the city of Niš. *Annals of Spiru Haret University Economic Series*, 21(4), pp.79–96.

Urban Sleuth (n.d.). *Urban Sleuth Augmented Reality Game*. Available at: https://urbansleuth.weebly.com/ (Accessed: 18 August 2025).

Wien Info (n.d.). *ivie – Your personal guide to Vienna*. Available at: https://www.wien.info/en/travel-info/ivie-app/ivie-app-349196 (Accessed: 18 August 2025).