

**Information and communication technology is supporting people to refine knowledge as
a safe balance of artificial and human intelligence
could leverage the search for the right tracks of World evolution**

-Part 2-



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Abstract

*The paper analysis is oriented to the role of ICT/AI for knowledge refining (KR) in the context of World actual uncertainties and crises, where AI-HI teaming would become essential for facing unprecedented fast challenges of the complex Earth ecosystem, by **keeping a safe balance of AI with HI**. AI is getting more and more involved in industry and our lives, while questions about how much can we trust on this way are also spreading, but such impressions should be documented by deeper analyses and we recall that KR, **considering all Earth ecosystem context and challenges, is the right way to proceed**. The high speed of ICT advances, a positive factor of progress, is, in the same time, a source of uncertainty and risks, because it could be lacking just the necessary, but dynamic, time of refining the knowledge on the holistic consequences at planetary scale the technical progress would have made on Earth ecosystem and human life/evolution, against the natural pace of adapting to changes. The too short time for analyses, regulations and decisions could surpass HI, while AI seems to take over the control in the Information Society (IS) on the way towards the Knowledge Based Society (KBS). The increasing complexity of ICT and the necessity of World sustainable progress, under the new crises and uncertainties, are opposite challenges for finding optimal solutions, because of the diversity, complicate interdependences and dynamic of factors to be considered, even using the powerful support of ICT/AI and the increasing education/creativity/potential of HI. Reasons of considering the above-mentioned factors and the necessity of trust and safe features for AI development and use could be also seen in the recent Paris AI Action Summit 2025, a milestone in the ICT/AI and World sustainable progress evolutions, as we analysed from [1]. A step forward from cooperation, on AI advance, is to improve the organizations/companies' strategies, as we have analysed by the next relevant example of AI development [2], recalling that one of the prominent challenges which make difficile to further improve ICT/AI performances is just the incredible high level already reached in their amazing evolution. This difficulty is in fact the superposition of many factors which influence the final necessary computing power for new advances of AI. As the economy/industry development and innovation are crucial for the mentioned sustainable progress, we have analysed some concrete issues of AI leveraging impact on software engineering from [4], resulting that AI could strongly contribute to improvements not only in the life cycle of production, but also in the HI/AI balance, by saving time for human creative side, based on KR. Recalling that mitigating risks and increasing trust are important for AI development, designing AI for applications with security intrinsic features is worth to be studied and relevant ideas for cybersecurity have been revealed from analysing [5]. Here we point **the subtle trend of AI/ICT development to innovate self-healing methods, even by returning on spiral higher levels**. Next, we could use advanced AI to mitigate the cyberattacks on infrastructures which already use some kind of AI, as ML. This way, we meet the known issue of arm versus counter-arm, which we already approached in the case of spread spectrum systems (SSS), as a vicious or spiral evolution. As we recently*

presented, the SSS technology was among the first examples of introducing AI in communications, just with the aim to combat electronic attacks. We conclude that this field is also a factor which must drive AI on its long and winding road, in the direction of safe balance of AI/HI and needs timely KR that preserves the fundamental humankind values and Earth ecosystem sustainable progress.

Keywords: AI Action Summit 2025, software product development life cycle, autonomous cyber defences, knowledge refining, artificial intelligence, human intelligence

JEL Classification: L63; L86; M15; O31; O33

Information is not knowledge.

- Albert Einstein

1. AI between practice and strategy development

As we advance on what most of humans consider progress and technology, observing World challenges and uncertainties, drive us to get help from machines to ease and improve our lives. This way seemed to be very useful with cars, planes, computers and recently with smartphones, to mention just a few examples.

In our days, we can see how artificial intelligence (AI) is becoming more and more involved in industry, society and our lives, while questions about how much can we trust on this way are also spreading.

Considering the natural observation that such impressions should be documented and confirmed by rational and deeper analyses, we recall that **refining knowledge, considering all Earth ecosystem context and challenges is the right way to proceed** [20] [23].

In fact, our opinion is still that, perhaps, the humankind strength should come from ourselves, as the machines force and potential must reflect our thinking and biologic progress, just like the amazing life evolution proved in millions of years on Earth.

Also, we repeatedly expressed that the high speed of technology, which is mainly considered a positive factor of progress, is, in the same time, a source of uncertainty and risks, because it could be lacking just the necessary, but dynamic, time of refining the knowledge on the holistic consequences at planetary scale the technical progress would have made on Earth ecosystem and human life/evolution, against the natural pace of adapting to changes [23].

Obviously, all these issues must be analysed and eventually confirmed by refining knowledge in every phase of World evolution, especially including, for a sustainable progress approaching, the actual dramatic crises and challenges, as global warming, Earth resources fading, social unbalances, geopolitical conflicts etc. [23].

Mainly, we pointed the same challenges/risks of the exponential speed of information and communication technology (ICT) development and proliferation, as the time for analyses, regulations and decisions could surpass human intelligence (HI), while AI seems to take over the control in the Information Society (IS) on the way towards the Knowledge Based Society (KBS) [23] [58].

On the other hand, the increasing complexity of ICT products, systems and applications and the necessity of World sustainable progress, under the new crises and uncertainties, are real/opposite challenges for finding optimal solutions at Earth ecosystem scale, because of the diversity, complicate/nonlinear interdependences and dynamic of factors to be considered, even using the new powerful support of ICT/AI and the increasing education/creativity/potential of HI [7] [9] [10] [13] [14].

This way we have just arrived to the focus of this paper analyses aim, where the potential of ICT/AI to leverage knowledge refining for the World sustainable progress has to be considered as depending on the processes of efficacy and efficiently developing ICT/AI, by what is going to be seen and understood as the team HI/AI, in a safe balance, for the Earth ecosystem and humankind rational evolution [58] [23] [13] [14].

The reasons of considering the above-mentioned factors and the necessity of trust and safe features for AI development and use could be also seen in the recent *Paris AI Action Summit 2025*, a milestone in the ICT/AI and World sustainable progress evolutions (comparable with *Paris Agreement on climate change 2015*), as it is also presented by [1]:

“The AI Action Summit 2025, held in Paris from February 6 to 11, was a landmark event. It convened global leaders, AI experts, researchers, policymakers, industry executives, and civil society representatives to shape the future of artificial intelligence. The summit focused on AI governance, safety, innovation, sustainability, and international collaboration.”

Completing the known echoes of this historical summit, it is worth to notice that almost all important challenges of AI development and use were in focus in Paris, including the above mentioned (knowledge refining/innovation, sustainable progress, safe balance), within a comprehensive context/approach:

“The summit discussions underscored AI’s vast potential while highlighting the urgency of ethical regulations, equitable access, and sustainable AI development. It also marked a significant step forward in fostering collaborative networks, such as the Global AI Ethics Consortium, and formulating comprehensive policy recommendations to drive responsible AI innovation. Despite AI’s immense promise, a critical challenge remains: harnessing its power responsibly while mitigating risks to security, human rights, and the environment. The summit reinforced the international community’s responsibility to shape an AI-driven future that upholds universal values.”

More than these, the AI objectives, vision and commitment strength was enlarged by the World leaders’ personal accents, as it is further detailed:

“In his inaugural address, French President Emmanuel Macron underscored AI’s transformative potential and the critical need for international collaboration to ensure its responsible development. He reaffirmed France’s commitment to leading AI innovation while upholding ethical standards.

Indian Prime Minister Narendra Modi, in his opening address [video, text], said the world was standing at the dawn of the AI age, where technology was rapidly reshaping politics, the economy, security, and society and fast writing the ‘code for humanity’. He emphasized that AI’s impact surpasses previous technological milestones, necessitating global cooperation to establish governance frameworks and standards that uphold shared values, mitigate risks, and foster trust. He stressed that AI governance must balance risk management with innovation...”

From the pillars of AI development and use, the messages were also clear and strong, with inherent specific known accents:

<<European Commission President Ursula von der Leyen advocated for a collaborative and open-source approach to AI development, emphasizing that public trust depends on transparency and inclusivity. She said, “AI can be a gift to humanity. But we must ensure its benefits are widespread and accessible to all. We want AI to be a force for good,

where everyone collaborates and benefits.” She called for frameworks that balance innovation with safeguards to protect societal interests.

U.S. Vice President JD Vance took a pro-business stance, cautioning against excessive regulation that could stifle innovation. >>

From AI technology industry inside view, we remark the constructive points of Google representative:

<<Google CEO Sundar Pichai expressed optimism about AI and its transformative potential, emphasizing the opportunity to benefit people worldwide. Citing examples of how technology improves lives, he described AI as “the most profound shift of our lifetimes.” Pichai underscored the importance of collaboration and concrete action to harness AI’s benefits equitably. He warned against the risk of an “AI divide,” urging global efforts to ensure fair access to AI technologies. He also highlighted the need for responsible development and deployment, and emphasized the critical role of public policy in shaping AI’s future. Pichai said, “This is an important and historic moment. When history looks back, it will see this as the beginning of a golden age of innovation. But these outcomes are not guaranteed. The biggest risk is missing out. Every generation fears that new technology will make the next generation’s lives worse—but it’s almost always the opposite. We have a once-in-a-generation opportunity to improve lives at the scale of AI.”>>

We also remark the mention of the crucial role of AI for *responsible development*, healthcare, education, social unbalance and sustainable progress (which we often considered with priority for AI applications):

“The summit emphasized AI’s role in healthcare, education, and economic development and in meeting the UN 17 sustainable development goals (SDGs), calling for open-source AI models and high-quality, unbiased datasets. However, concerns were about AI reinforcing societal inequalities, urging collaborative frameworks that empower all nations, especially those in the Global South.”

Without minimizing the summit importance and consequences, we consider that from the positive declarations to the solutions of such complex and complicate processes of AI and ICT in the World challenges context, further analyses and actions have to be detailed and made.

A step forward from cooperation and communications, on AI development in benefit of the entire World sustainable progress, is to search for efficient strategies toward implementing such objectives, first including the organizations/companies strategies, as it approached by the next relevant example in [2]:

“Artificial intelligence is set to revolutionize strategy activities. But as AI adoption spreads, strategists will need proprietary data, creativity, and new skills to develop unique options. At its core, strategy entails deriving insights from facts and data, developing real options based on those insights, making hard-to-reverse choices, and executing initiatives that convert those choices into value. Data analytics has assisted in this work for several decades, but never before has technology been able to not only augment and partially automate inputs into strategy but also combine them into complex analyses. In time, it may even recommend viable strategies. Artificial intelligence and generative AI have the potential to transform how strategists work by strengthening and accelerating activities such as analysis and insight generation while mitigating challenges posed by human biases and the social side of strategy. Building on the recent explosion in data and earlier AI advances that produced dramatic

improvements in forecasting accuracy, the latest tools are making deriving insights much easier and cheaper.”

Again, we have to recall that one of the prominent challenges which make difficult to further improve ICT/AI performances is just the incredible high level already reached in their amazing evolution [23][8][11][20]. This difficulty is in fact the superposition of many factors which influence the final necessary *computing power* for new advances of AI:

“Amid the AI boom, compute power is emerging as one of this decade's most critical resources, influencing the pace at which AI is deployed. Data centers train the foundation models and machine learning applications that underpin all AI technology. The hardware, processors, memory, storage, and energy needed to operate these data centers are collectively known as compute power—and there is a seemingly unquenchable need for more. Meeting this demand is not simply a race to invest trillions of dollars.”

Just from this point we observe the actual critical area of the AI/HI, we also mentioned from the beginning:

“Human judgment remains essential to crafting the strategic vision, which combines the organization's ambition with a view of how to realize it. However, AI can accelerate and bring greater rigor to the work of strategy teams. Even in these early days, we see five roles for AI: researcher, interpreter, thought partner, simulator, and communicator. Each of these roles can come into play at various steps across the different phases of strategy development”.

Perhaps it should not be a surprise if we conclude that, **as we are deepening the analysis, we find more factors/roots of the complexity/difficulty to reach a sustainable progress, even in particular fields of AI advances (researcher, interpreter, thought partner, simulator and communicator), leading us to further and timely studies/analyses, as the World context and the results are considered.**

2. ICT support for safe progress and innovation involves knowledge refining by teaming AI with humans

In order to further understand the potential and the challenges of ICT/AI role in the actual World context, where the economy/industry development and innovation are crucial for the mentioned sustainable progress, some concrete issues of AI leveraging *impact on software engineering* could be also relevant [4]:

“By integrating all forms of AI into the end-to-end software product development life cycle (PDLC), companies can empower product managers (PMs), engineers, and their teams to spend more time on higher-value work and less on routine tasks. As part of this broad shift, they can incorporate more robust sources of data and feedback in a new development framework that prioritizes customer-centric solutions. This holistic redesign should ultimately accelerate the process, improve product quality, increase customer adoption and satisfaction, and spur greater innovation.”

Here it is clear that AI could strongly contribute to improvements not only in the life cycle of production, but also in the balance HI/AI, by saving time for human creative side:

“Many organizations are already experiencing the time-saving impact of gen AI in software engineering, but gen AI can do the same for the entire product management and development process. Much of this acceleration comes by shortening the journey from the early

strategy and vision stages to late-stage product deployment and scaling. AI's ability to automate time-consuming routine tasks such as project management, market analysis, performance testing, and feedback analysis and documentation frees PMs, engineers, and designers to focus on higher-value, more satisfying tasks requiring human creativity and judgment. These range from product vision and strategy setting to concept development and feature prioritization."

Naturally, increasing human creative conditions will ease the way to the innovations which are so necessary for finding solutions of sustainable progress, based on knowledge refining:

"This shift not only speeds up the development cycle but also offers unprecedented opportunities for innovation. The time savings and information AI tools provide can allow teams to create multiple iterations of a product, improving its market fit. As part of this acceleration, organizations should be able to conduct faster market testing and respond more swiftly to user feedback, consumer changes, and shifting dynamics or trends, which should result in better products. For example, AI can stitch together data from initial customer research during the discovery and viability phases along with telemetry, service ticket data, and support feedback to track impact end to end. AI tools can also integrate real-time customer input, social media sentiment/ interactions, and competitive research alongside historical data and market trends. Teams using this approach can gain actionable insights to help create more rigorous and customer-centric product concepts, thus increasing successful launches. "

It is worth to observe that the AI support could bring more rigorous models of production and business, increasing viability and mitigating subjectivity of decisions:

"Using AI for prototyping and testing new product ideas significantly reduces the resources required in the viability stage. As a result, product teams can run many more experiments, raising the odds of promising ideas getting due consideration. Organizations can also use AI to eliminate some of the guesswork. For example, organizations no longer have to take the sometimes unreliable step of stack-ranking ideas before testing their viability. Without data informing this decision-making process, the process has always been susceptible to the undue influence of the loudest voice in the room or the highest-paid person's opinion, known as HiPPO bias. While it seems unrealistic to think that AI will do away with hierarchy-driven decisions entirely, it does have the potential to reduce the subjectivity of the process. "

We could extrapolate the mitigation of decisions subjectivity from organization/company to other humankind decisions or processes, as a promising feature of AI which clearly will leverage knowledge refining everywhere humans have to think, decide or act, in the dynamic context of World challenges/crises.

On the other hand, the amazing advances of ICT/AI could unprecedentedly improve all Earth ecosystem processes, but we should also consider the challenges and vulnerability/risks such performance and large-scale proliferation would make possible, sooner or later [15] [16] [17] [18] [19] [20] [21].

As it was clearly been mentioned above, *mitigate risks and foster trust* are crucial for AI development. Consequently, designing AI for applications with security intrinsic features it is worth to be studied and relevant solutions could be also observed from [5]:

„Managing risks is a recurring research topic in cybersecurity, especially in the context of recent cyberattacks and ransomware-based disruptions in operations across the U.S.

infrastructure [1]. Unfortunately, a growing number of malicious activities have been supported by machine learning (ML) such as password cracking, generation of new malware and deceiving biometric systems [2]. ML-based attacks are increasingly frequent and sophisticated, resulting in higher risk of damage to target systems. Moreover, in the world of cyber operations time is often measured in milliseconds. From denial-of-service attacks to spreading of ransomware or other malware across an organization's network, it is possible that manually operated defenses are not able to respond in real time at the scale required, and when a breach is detected and remediated the damage is already made."

Here we have to point the subtle and long expected feature/trend of AI/ICT development to innovate self-healing methods, even by returning on spiral (historical) higher evolutions/levels.

In a simpler expression, we could use advanced AI to counter/mitigate the cyberattacks on infrastructures which already use some kind of AI, as ML:

"Autonomous cyber defenses therefore become essential to mitigate the risk of successful attacks and their damage, especially when the response time, effort and accuracy required in those defenses is impractical or impossible through defenses operated exclusively by humans. Autonomous agents have the potential to use ML with large amounts of data about known cyberattacks as input, in order to learn patterns and predict characteristics of future attacks [3]. Moreover, learning from past and present attacks enable defenses to adapt to new threats that share characteristics with previous attacks."

It is very interesting to observe here that, especially in military/security AI applications, we are entering the known issue of arm versus counter-arm, which we already approached in the case of spread spectrum systems (SSS) [24][25][22], as a vicious or spiral evolution. More than these, we pointed that, in fact, the SSS technology was among the first examples of introducing AI in communications, just with the aim to combat electronic attacks [6][26].

This way we could conclude about another important factor, as it is the military/security field, which drives AI on its long and winding road, in the direction of safe balance of artificial and human intelligence and needs timely knowledge refining that preserves the fundamental humankind values and Earth ecosystem sustainable progress.

3. Conclusions

Observing that World challenges and uncertainties drives us to get help from machines to ease and improve our lives, first using cars, planes, computers and recently smartphones, to mention just a few examples, actually we see that artificial intelligence (AI) is becoming more and more involved in industry, society and our lives (while questions about how much can we trust on this way are also spreading), such impressions should be documented by rational and deeper analyses and we recall that **refining knowledge, considering all Earth ecosystem context and challenges is the right way to proceed [20] [23]. Still, perhaps, the humankind strength should come from ourselves, as the machines force and potential must reflect**

our thinking and biologic progress, just like the amazing life evolution proved in millions years on Earth.

Also, we repeatedly expressed that the high speed of technology, which is mainly considered a positive factor of progress, is, in the same time, a source of uncertainty and risks, because it could be lacking just the necessary, but dynamic, time of refining the knowledge on the holistic consequences at planetary scale the technical progress would have made on Earth ecosystem and human life/evolution, against the natural pace of adapting to changes [23]. All these issues must be analysed and eventually confirmed by refining knowledge in every phase of World evolution, especially including, for a sustainable progress approaching, the actual dramatic crises and challenges, as global warming, Earth resources fading, social unbalances, geopolitical conflicts etc. [8]. We pointed the same challenges/risks of the exponential speed of ICT development and proliferation, as the time for analyses, regulations and decisions could surpass HI, while AI seems to take over the control in the IS on the way towards the KBS [11][23] [58].

On the other hand, the increasing complexity of ICT products, systems and applications and the necessity of World sustainable progress, under the new crises and uncertainties, are real/opposite challenges for finding optimal solutions at Earth ecosystem scale, because of the diversity, complicate/nonlinear interdependences and dynamic of factors to be considered, even using the new powerful support of ICT/AI and the increasing education/creativity/potential of HI [7] [9] [10] [13] [14].

The focus of this paper analyses aim is on the potential of ICT/AI to leverage knowledge refining for the World sustainable progress, which has to be considered as depending on the processes of efficacy and efficiently developing ICT/AI, by what is going to be seen and understood as the team HI/AI, in a safe balance, for the Earth ecosystem and humankind rational evolution [17] [58] [23] [13] [14].

Reasons of considering the above-mentioned factors and the necessity of trust and safe features for AI development and use could be also seen in the recent *Paris AI Action Summit 2025*, a milestone in the ICT/AI and World sustainable progress evolutions (comparable with *Paris Agreement on climate change 2015*), as we analysed from [1]. It is worth to notice that almost all important challenges of AI development and use were in focus in Paris, including the above mentioned (knowledge refining/innovation, sustainable progress, safe balance), within a comprehensive context/approach and completed with vision and commitment strength from World leaders personal accents and from AI technology industry inside view, were we remark the constructive points of Google and the mention of the crucial role of AI for *responsible development*, healthcare, education, social unbalance and sustainable progress (which we often considered with priority for AI applications). Without minimizing the summit importance and consequences, we consider that from the positive declarations to the solutions of such complex and complicate processes of AI and ICT in the World challenges context, further analyses and actions have to be detailed and made.

A step forward from cooperation and communications, on AI development in benefit of the entire World sustainable progress, is to search for efficient strategies toward implementing such objectives, first including the organizations/companies strategies, as we have analysed by the next relevant example of AI development [2], recalling that one of the prominent challenges which make difficile to further improve ICT/AI performances is just the

incredible high level already reached in their amazing evolution [23][8][11][20]. This difficulty is in fact the superposition of many factors which influence the final necessary *computing power* for new advances of AI (*data centers*). Among them, we observe the actual critical area of the AI/HI (*Human judgment remains essential to crafting the strategic vision...*).

This way we conclude that, **as we are deepening the analysis, we find more factors/roots of the complexity/difficulty to reach a sustainable progress, even in particular fields of AI advances (researcher, interpreter, thought partner, simulator and communicator), leading us to further and timely studies/analyses, as the World context and the results are considered.**

For further understanding the potential and the challenges of ICT/AI role in the actual World context, where the economy/industry development and innovation are crucial for the mentioned sustainable progress, we have analysed some concrete issues of AI leveraging *impact on software engineering* from [4], resulting that AI could strongly contribute to improvements not only in the life cycle of production, but also in the balance HI/AI, by saving time for human creative side, as, increasing human creative conditions will ease the way to the innovations which are so necessary for finding solutions of sustainable progress, based on knowledge refining, where increasing viability and mitigating subjectivity of decisions are crucial. We could extrapolate **the mitigation of decisions subjectivity from organization/company to other humankind decisions or processes, as a promising feature of AI which clearly will leverage knowledge refining everywhere humans have to think, decide or act, in the dynamic context of World challenges/crises.**

While the amazing advances of ICT/AI could unprecedentedly improve all Earth ecosystem processes, we should also consider the challenges and vulnerability/risks such performance and large scale proliferation would make possible, sooner or later [15] [16] [17] [18] [19] [20] [21]. Recalling that *mitigate risks and foster trust* are crucial for AI development, designing AI for applications with security intrinsic features it is worth to be studied and relevant ideas for *cybersecurity* have been observed from analysing [5]. Here we have to point **the subtle and long expected feature/trend of AI/ICT development to innovate self-healing methods, even by returning on spiral (historical) higher evolutions/levels. In a simpler expression, we could use advanced AI to counter/mitigate the cyberattacks on infrastructures which already use some kind of AI, as ML.**

It is very interesting to observe here that, **especially in military/security AI applications, we are entering the known issue of arm versus counter-arm, which we already approached in the case of spread spectrum systems (SSS) [24][25][22], as a vicious or spiral evolution. More than these, we pointed that, in fact, the SSS technology was among the first examples of introducing AI in communications, just with the aim to combat electronic attacks [6][26].**

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REFERENCES

- [1]San Murugesan, *Navigating New Frontiers: The Paris AI Action Summit 2025*, <https://www.computer.org/publications/tech-news/trends/paris-ai-action-summit?source=cedge0304>, Published 02/28/2025
- [2]Alexander D'Amico, Bruce Delteil, and Eric Hazan, Andrea Tricoli, Antoine Montard, *How AI is transforming strategy development*, February 5, 2025, <https://www.mckinsey.com/capabilities/strategy-and-corporate-finance/our-insights/how-ai-is-transforming-strategy-development?stcr=E49D395292B34567ADC2C34D83F1DEE3&cid=other-eml-alt-mip-mck&hlkid=ea713525fbfb4c59b2f46125951add4&hctky=15934655&hdpid=84a90038-f7ba-4a94-9389-7d0480f5f302>
- [3]Victor Greu, *Information and communication technology is supporting people to refine knowledge as a safe balance of artificial and human intelligence could leverage the search for the right tracks of World evolution (Part 1)*, **Romanian Distribution Committee** (affiliated to the “International Association of the Distributive Trade”-scientific association – A.I.D.A. Brussels) **Magazine** (international; electronic; covered in RePEc International Data Base), Volume 16, Issue 1, Year 2025.
- [4]Chandra Gnanasambandam, Martin Harrysson, Rikki Singh, Aditi Chawla, *How an AI-enabled software product development life cycle will fuel innovation*, February, 10, 2025 , <https://www.mckinsey.com/industries/technology-media-and-telecommunications/our-insights/how-an-ai-enabled-software-product-development-life-cycle-will-fuel-innovation?stcr=E1F186B74AC54504BAA4A5221F4B756E&cid=other-eml-alt-mip-mck&hlkid=2bd64e6d3e384859bb72750f9b32bd7b&hctky=15934655&hdpid=991d08f1-e772-4c47-ac39-c021aa36060d>
- [5]Alexandre K. Ligo, Alexander Kott, Igor Linkov, *Autonomous Cyber Defense Introduces Risk: Can We Manage the Risk?*, <https://www.researchgate.net/publication/358163077>, 2022
- [6]Victor Greu, *From Spread Spectrum Communications to Artificial Intelligence – a continuous way where Information and Communication Technology supports the World progress in the fight against interference and cyber attacks*, **Romanian Distribution Committee** (affiliated to the “International Association of the Distributive Trade”-scientific association – A.I.D.A. Brussels) **Magazine** (international; electronic; covered in RePEc International Data Base), Volume 15, Issue 4, Year 2024.
- [7]***, *What is artificial general intelligence (AGI)?*, McKinsey & Company, March 21, 2024, <https://www.mckinsey.com/featured-insights/mckinsey-explainers/what-is-artificial-general-intelligence-agi?stcr=FE1459B2934148CB8AC4DF19A1B8822C&cid=other-eml-alt-mip-mck&hlkid=b79603d40f65458abe26473ee7a138c6&hctky=15934655&hdpid=766b760c-8070-4f2c-8946-b40846cea7ed>
- [8]Victor Greu), *Tomorrow's Paradox: Refining Knowledge By Smarter Information And Communications Technologies While Humans Tend To Become A Limited Factor Of Performance*, **Romanian Distribution Committee** (affiliated to the “International Association of the Distributive Trade”-scientific association – A.I.D.A. Brussels) **Magazine** (international; electronic; covered in RePEc International Data Base), Volume 7, Issue 1, Year 2016
- [9]***, *Who Benefits from AI? The State of AI Governance*, IEEE Computer Society Team, Published 02/11/2025, <https://www.computer.org/publications/tech-news/research/ai-governance>
- [10]***, *AI Is Everywhere—Can Standards Catch Up?*, IEEE Computer Society Team, Published 02/03/2025, <https://www.computer.org/publications/tech-news/research/ai-standards>
- [11]Victor Greu, *The Exponential Development of the Information and Communications Technologies – A Complex Process Which is Generating Progress Knowledge from People to*

People, Romanian Distribution Committee (affiliated to the “International Association of the Distributive Trade”-scientific association – A.I.D.A. Brussels) **Magazine** (international; electronic; covered in RePEc International Data Base), Volume 4, Issue2, Year 2013

[12]Alex Singla et al, *Generative AI Capturing the opportunity*, QuantumBlack, AI by McKinsey, <https://www.mckinsey.com/capabilities/quantumblack/how-we-help-clients?cid=other-eml-alt-mip-mck&hlkid=e3b4044e8dae4e538d3385a68bbde0a1&hctky=15934655&hdpid=766b760c-8070-4f2c-8946-b40846cea7ed>

[13]Victor Greu et al, *Human and artificial intelligence driven incentive-operation model and algorithms for a multi-purpose integrated crowdsensing-crowdsourcing scalable system*, Proceedings of International Conference Communications 2018, (Politehnica University of Bucharest, Military Technical Academy, IEEE Romania), June 2018(COMM 2018 is covered in IEEE Explore Database and ISI Web of Science in the Conference Proceedings Citation Index).

[14]Florin Enache, Victor Greu, Petrică Ciotîrnae, Florin Popescu, *Model and Algorithms for Optimizing a Human Computing System Oriented to Knowledge Extraction by Use of Crowdsourcing*, 2020, 13th International Conference on Communications (COMM), (Politehnica University of Bucharest, Military Technical Academy, IEEE Romania), (COMM 2020 is covered in IEEE Explore Database and ISI Web of Science in the Conference Proceedings Citation Index)

[15]Giuliano Punzo et al, *Engineering Resilient Complex Systems: The Necessary Shift Toward Complexity Science*, IEEE SYSTEMS JOURNAL, VOL. 14, NO. 3, SEPTEMBER 2020

[16]Victor Greu, *The information and communications technology is driving artificial intelligence to leverage refined knowledge for the World sustainable development – (Part 2)*, **Romanian Distribution Committee** (affiliated to the “International Association of the Distributive Trade”-scientific association – A.I.D.A. Brussels) **Magazine** (international; electronic; covered in RePEc International Data Base), Volume 10, Issue 1, Year 2019.

[17]Qingtian Zou, Lan Zhang, Xiaoyan Sun, Anoop Singhal, Peng Liu, *Using Explainable AI for Neural Network-Based Network Attack Detection*, Computer, Volume 57, Issue 5, 02 May 2024, <https://doi.org/10.1109/MC.2023.3342602>

[18]Victor Greu, *Extending information and communications technologies’ impact on knowledge based society through artificial and collective intelligence –(Part 3)*, **Romanian Distribution Committee** (affiliated to the “International Association of the Distributive Trade”-scientific association – A.I.D.A. Brussels) **Magazine** (international; electronic; covered in RePEc International Data Base), Volume 9, Issue 3, Year 2018.

[19]***, *Strategies to Tackle Uncertainty With AI Deployment*, Computer Society Team, 12/19/2022, <https://www.computer.org/publications/tech-news/research/strategies-to-tackle-uncertainty-with-ai-deployment>

[20]Victor Greu, *Information and communications technologies go greener beyond IOT-behind is all the earth-Part1*, **Romanian Distribution Committee** (affiliated to the “International Association of the Distributive Trade”-scientific association – A.I.D.A. Brussels) **Magazine** (international; electronic; covered in RePEc International Data Base), Volume 7, Issue 2, Year 2016.

[21]Amy Blackshaw, *How Cyber Resilience Enables Business Growth*, July 06,2022, https://www.bitdefender.com/blog/businessinsights/how-cyber-resilience-enables-business-growth?utm_campaign=hvi-open-source&utm_medium=email&_hsmt=93802209&_hsenc=p2ANqtz-9h7etfPPjDkO3RoUDsSik2A2m-MFNGaqjVujgI2LTXuCywRkF13zeyJANACDrIc4cX_4kowRZ2cjb0Y1DQVc1SBjAtEA&utm_content=93802209&utm_source=hs_automation%2F

[22]Victor Greu, *The Code Division Multiple Access from Complicated to The Actual Mobile Communications Standards and Beyond*, **Romanian Distribution Committee** (affiliated to the “International Association of the Distributive Trade”-scientific association – A.I.D.A. Brussels) **Magazine** (international; electronic; covered in RePEc International Data Base), Volume 4, Issue 3, Year 2013.

[23]Victor Greu, *Searching the right tracks of new technologies in the earth race for a balance between progress and survival*, Romanian Distribution Committee (affiliated to the “International Association of the Distributive Trade”-scientific association – A.I.D.A. Brussels) Magazine(international; electronic; covered in RePEc International Data Base), Volume 3, Issue1, Year 2012.

[24]Victor P. Greu, *Jamming and Interference resistant radio communications*, The Military Printing House, Bucharest, 1992 (in Romanian language).

[25]Victor Greu, Bogdan Vasilescu, *Basic method for generating "quasi-orthogonal" spread-spectrum signal formats*, Proceedings of the International Conference "ECCTD'97(European Conference on Circuits Theory and Design)", Budapest-Hungary, 1997.

[26]Victor Greu, *Spread Spectrum Communications Systems*, The Military Technical Academy Printing House, Bucharest, 1997 (in Romanian language).

