GhIE
GHANA INSTITUTION OF ENGINEERING

NEWSLETTER

JUNE 2026

Ing Rev. Prof. Charles Anum Adams is the President-Elect of WAFEO

The Ghana Institution of Engineering (GhIE) proudly celebrates the election of Ing Rev. Prof. Charles Anum Adams, a distinguished Fellow and Past President of the Institution, as President-Elect of the West African Federation of Engineering Organisations (WAFEO).

Ing Rev. Prof. Charles Anum Adams to Help Shape the Future of Engineering in Africa

His election represents a landmark achievement not only for GhIE but also for Ghana's engineering profession, underscoring the growing influence and leadership of Ghanaian engineers on the regional and international stage.

Ing Rev. Prof. Charles Anum Adams was elected during the WAFEO–ECOWAS Inaugural Conference held on 15 June 2026 in Freetown, Sierra Leone. He will assume office in January 2027 for a two-year term ending in January 2029, succeeding Engr. Dadley Decontee Toe of Liberia.

GhIE extends its heartfelt congratulations to Ing Rev. Prof. Charles Anum Adams on this well-deserved honour and expresses full confidence in his ability to provide visionary leadership for WAFEO. His wealth of experience, unwavering commitment to engineering excellence, and dedication to regional collaboration will undoubtedly advance the engineering profession and champion sustainable infrastructure development across West Africa.
This achievement is a proud moment for Ghana and a testament to the calibre of leadership within the Ghana Institution of Engineering.

Built Environment Professionals Advocate Metropolitan Governance Reforms to Address Urban Challenges

Pictured are (4th from left) Pln. Percy Anaab Bukari, President of the Ghana Institute of Planning (GIP); (5th from left) Ing Ludwig Annang Hesse, President of the Ghana Institution of Engineering (GhIE); and (6th from left) Arc. Tony Asare, President of the Ghana Institute of Architects (GIA), alongside participants committed to shaping more resilient, coordinated, and future-ready cities for Ghana.

The increasing complexity of urban development in Ghana has renewed calls for a more coordinated approach to metropolitan governance, planning, and infrastructure delivery.
This was the central focus of the Built Environment Professionals Breakfast Roundtable held on 3 June 2026 at the Engineering Centre in Accra under the theme, "Greater Metropolitan Area Management in Ghana: Towards Integrated Planning, Governance and Infrastructure Delivery."

The forum was jointly organised by the Ghana Institution of Engineering (GhIE), Ghana Institute of Architects (GIA), Ghana Institute of Planning (GIP), and the Ghana Institution of Surveyors (GhIS). It brought together engineers, architects, planners, surveyors, governance experts, policymakers, and urban development practitioners to discuss practical solutions to the growing challenges facing Ghana's metropolitan areas.

GhIE Town Hall Meeting Promises Greater Engagement, Stronger Institutions and a Brighter Future for Engineers

From Left: Ing Isaac Bedu, Registrar of Engineering Council; Ing Dr. Kwame Boakye, GhIE past president; Ing Kwabena Bempong, GhIE Immediate Past President; Ing Sophia Tijani, GhIE President Elect; Ing Ludwig Annang Hesse, GhIE President; Ing Dr Enyonam Kpekpena, GhIE Execitive Director; Ing Frederick Asare-Yeboah, GhIE past president and Ing Dr Robert Adjaye

The Ghana Institution of Engineering (GhIE) has reaffirmed its commitment to building a stronger, more responsive, and member-focused institution following a successful Town Hall Meeting hosted by the President, Ing Ludwig Annang Hesse, F -GhIE, on 4 June 2026.

Held under the theme "Engineering Our Future: Do It Well, Do It Right!", the engagement provided members with a unique opportunity to interact directly with the leadership of the Institution, review progress made over the past six months, and contribute ideas towards shaping the future direction of GhIE.

Addressing members, Ing Hesse highlighted a series of strategic initiatives and institutional reforms aimed at enhancing member services, strengthening governance structures, promoting engineering excellence, and increasing the influence of the engineering profession in national development..

Among the key achievements outlined were the launch of an upgraded GhIE website, the publication of a comprehensive Questions and Answers document from the previous Town Hall meeting for members, and the reintroduction of the monthly GhIE. Newsletter to improve communication and engagement across the Institution. The President also reported on ongoing engagements with engineering faculties in universities to strengthen collaboration between academia and the profession.

A major highlight of the presentation was GhIE's collaboration with the Engineering Council and the Institution of Engineering and Technology (IET) to advance harmonisation within the engineering profession. Discussions are currently focused on developing a common Code of Ethics, a unified professional examination framework, standardised Continuing Professional Development (CPD) requirements, and clearer pathways for engineering specialisation.

Celebrating International Women in Engineering Day

As we commemorate International Women in Engineering Day, we shine a spotlight on the outstanding women engineers of the Women in Engineering (WinE) network whose dedication, ingenuity, and passion continue to break barriers, transform communities, and inspire the next generation of engineering leaders.

Ing Rosemary Oppong Kwasie
Group TSF Engineer, Endeavour Mining
President, Women in Mining Ghana

Engineering has taught me that resilience is often built in the moments no one sees. Whether working through challenges, adapting to change or staying focused when the path is uncertain. Throughout my career, I have seen how innovation grows when people are willing to ask questions and challenge assumptions while learning from their experiences. Women in engineering bring valuable perspectives that strengthen teams and improve outcomes. Every project, every challenge, and every success create an opportunity to inspire others. By supporting and encouraging more women to pursue engineering, we help shape a profession that is stronger, more diverse, and better prepared for the future.

Ing Mavis Dede Allotey
Deputy Project Engineer
Ghana Ports and Harbours Authority

As women engineers, we are proving every day that innovation thrives where resilience meets purpose. Our journeys often require us to navigate complex challenges, break barriers, and lead in spaces where our voices were once underrepresented. Through perseverance, technical excellence, and a commitment to service, we are shaping infrastructure, transforming communities, and creating sustainable solutions for future generations. Resilience gives us the strength to keep building despite obstacles, while innovation empowers us to reimagine what is possible. By inspiring, mentoring, and uplifting others, women in engineering are not only changing the profession, we are helping to shape a better world.

Ing Mrs. Sariel Adobea Etwire
Accra West Regional General Manager
Electricity Company of Ghana

One of the world's best innovations was training women to work as engineers. Though the journey from inception has not been a luxury, our resilience to succeed and the cascading positive impacts of our creative ideas, intelligence and strength with purpose has paved way for more women in the profession, leading to our growth and acceptance.

I therefore urge all professional women engineers to continue to dream big, embrace more changes, reinvent from the challenges that confront our gender and work passionately to make our world a better place for "a women engineer represents innovation and resilience

Ing Mrs. Gloria Afua Poku
Senior GIS Officer
Ghana Water Ltd.

Women in engineering teach us that innovation thrives through diversity, determination, and adaptability. As a Geospatial Engineer, I observe how women bring crucial attention to detail to spatial and environmental challenges. This precision is essential in geospatial engineering, where accuracy in mapping, data analysis, and infrastructure planning drives project success. Their careful observation uncovers patterns and errors others might overlook. Coupled with resilience in a male-dominated field, women engineers inspire excellence and sustainable innovation. They prove that precision and perseverance drive progress, demonstrating that technical excellence is strengthened by inclusivity, empathy, and leadership.

Ing Benedicta Opokua Acherekoh
Associate Vice President, Business Development
Associated Consultants Ltd

Engineering is a broad, people-centered profession driven by empathy, creativity, and a commitment to improving lives. By nature, women multitask, allowing us to challenge assumptions and inspire innovation. While once viewed as a male-dominated career, women have disproved this theory. As a civil engineer managing office and site work while raising a family, my experience reflects a growing trend: more women are thriving in demanding careers, including working on construction sites while pregnant. Our presence proves that engineering goes beyond calculations and machines, it thrives when diverse perspectives come together to solve real human problems.

Ing Dr. Margaret Mary Bruce-Mensah
Research Scientist/CSIR-IIR (Council for Scientific and Industrial Research-Institute of Industrial Research)

One thing I've learnt as a Chemical Engineer and a Research Scientist working at one of the leading Research Institutes in Ghana, is the ability to do more with the 'little' resources available, which has led me to bring diverse perspectives to engineering solutions that is more effective and sustainable. This has also made me to think outside the box and bring results that challenge conventional thinking and unlock fresh approaches to complex problem-solving. Through creativity and determination, my experiences at CSIR-IIR has demonstrated that resilience is not only about overcoming obstacles but also about transforming challenges into opportunities for growth and progress.

WinE Celebrates Engineering Intelligence on International Women in Engineering Day with School Girls across the Country

Women in Engineering (WinE) members across the country engaged and inspired hundreds of schoolgirls to pursue STEM education, embrace innovation, and become the engineers and problem-solvers of tomorrow.

WinE Branch 5 celebrates International Women in Engineering Day in Tamale with Tamale Technical University , Bolgatanga Technical University, Tamale Senior High School, Tamale Technical Institute, Lamashegu Technical Institute and Kofi Annan Technical Institute showcasing the intelligence, innovation, and leadership of women engineers driving development in Northern Ghana.

WinE Branch 7 inspires hope and ambition among schoolgirls in Fiji Senior High School, Archbishop Porter Girls Snr High School, St Anthony Preparatory School (Ketan), Ketan St. John's Anglican Primary and JHS, and Nana Nketia Basic School encouraging them to dream big and pursue opportunities in STEM and engineering careers.

WinE Branch 3 celebrates International Women in Engineering Day with Akwamuman Senior High School, inspiring the next generation of innovators, problem-solvers, and engineering leaders.

WinE Branch 2 marks International Women in Engineering Day with Notre Dame SHS and Solomon Bennett SHS, by empowering schoolgirls to dream beyond limits, embrace STEM, and become the engineers, innovators, and leaders of tomorrow.

WinE Branch 4 celebrates International Women in Engineering Day with Gbawe cluster of schools in Accra, inspiring young girls to pursue STEM, unlock their potential, and become the engineering leaders of the future.

The Hidden Health Crisis Behind Galamsey: Why Ghana Must Act Now

By: Ing Gideon Etornam Amenuveve

Illegal mining, popularly known as galamsey, is causing far greater damage to Ghana than many of us can currently comprehend. If this environmental menace continues unchecked, the nation risks facing a major public health and ecological disaster. This is a clarion call to Government, the Ministry of Lands and Natural Resources, regulatory agencies, traditional authorities, and all stakeholders to intensify efforts to halt this destructive practice before the consequences become irreversible.

Mining itself is not the problem. As a trained Metallurgical Engineer, I fully appreciate the importance of mineral extraction to economic development. Minerals have little value if they remain buried beneath the earth's crust. The challenge lies in the reckless and environmentally destructive methods being employed by illegal miners, who operate with little regard for the long-term consequences of their activities.

Mining requires significant quantities of water during the mineral beneficiation process. Licensed large-scale mining companies invest heavily in water management systems, including sedimentation ponds, water recycling facilities, and engineered tailings dams that are closely monitored to prevent contamination of rivers, groundwater, and surrounding ecosystems. In addition, these companies are required to post reclamation bonds and implement land restoration plans upon closure of their operations.

Illegal miners, however, make no such investments. In their pursuit of quick profits, they often divert rivers, excavate indiscriminately, and discharge untreated mining waste directly into water bodies. Open pits are abandoned, landscapes are degraded, and entire ecosystems are left devastated. One of the most dangerous aspects of galamsey is the widespread use of mercury during gold extraction. Mercury is used to amalgamate gold particles from crushed ore. During the heating process, the mercury evaporates into the atmosphere, exposing miners and nearby communities to highly toxic vapours. At the same time, mercury and other heavy metals associated with gold-bearing ore including arsenic, cadmium, manganese, lead, nickel, cobalt, and zinc are released into rivers, streams, and groundwater systems.

These contaminants do not simply disappear. They accumulate in the environment, enter the food chain, and can travel significant distances through underground water systems. Fish and other aquatic organisms absorb these toxic substances, eventually exposing human populations to dangerous levels of contamination.

The health implications are alarming. Mercury exposure can damage the nervous system, kidneys, lungs, digestive system, skin, and immune system. In severe cases, it can result in neurological disorders such as Minamata disease. Other heavy metals have been linked to organ failure, cardiovascular diseases, developmental disorders, reproductive health complications, and increased cancer risks.

The tragedy is that while illegal miners may be exposing themselves to these hazards in pursuit of wealth, the consequences extend far beyond the mining sites. Entire communities are being placed at risk through contaminated water sources, polluted farmlands, and degraded ecosystems. Future generations may ultimately bear the heaviest burden of today's environmental negligence.

At the same time, Ghana is already grappling with the impacts of climate change, including erratic rainfall patterns, rising temperatures, coastal erosion, floods, and droughts. The destruction of forests, wetlands, and biodiversity caused by galamsey further weakens the country's natural resilience to these challenges.

The combined impact of environmental degradation and climate change could impose enormous health and economic costs on an already stretched national healthcare system.

The fight against galamsey must therefore be viewed not only as an environmental issue but also as a public health emergency and a national security concern. Decisive action is needed to protect Ghana's water resources, forests, agricultural lands, and the health of its people.

The nation must confront this challenge with urgency, courage, and collective resolve. Government, regulators, traditional leaders, communities, civil society organisations, and citizens all have a role to play in safeguarding Ghana's natural resources.

The cost of inaction is simply too high.

The time to act is now before the environmental and health consequences of galamsey become too severe to reverse.

About the Author

By: Ing Gideon Etornam Amenuveve, MSc. (Eng. & Mgt), MBA. (Financial Risk Mgt), Pg. Diploma (OHS&Env. Mgt), BSc. (Met. Eng.) Professional Engineer (PE- GhIE), Certified Fellow and global business analyst (FCGBA), Chartered Safety Professional (CMIOSH), Lead Risk Manager, Lead ISO Auditor and Trainer, Lean Practitioner.

GhIE Ethical Insight

Powered by the Professional Practice and Ethics Committee

This Week's Buzzword: HONESTY

Code of Ethics 2.1.1

"2.1.1 **Honesty**, justice, and integrity form a moral philosophy, which associated with mutual interest among people, constitute the foundation of ethics. Members and Registered Entities of the Ghana Institution of Engineering shall recognize such a standard as a set of dynamic principles to guide their conduct and way of life; their duty to practice the profession according to this Code of Ethics"

Remember:

Even when honesty isn't easy, it's essential for long-term credibility and ethical leadership in engineering.

AI in My Engineering Workflows

A practitioner's view on putting AI to work

By Ing Jean Baptista K. Nyaku - Senior Civil Engineer – ABP Consult Ltd.

Artificial Intelligence can be simply described as training machines to mimic human intelligence. Computers simulating human learning, comprehension, decision making and autonomy are all tenets of AI. Engineering is, at its core, information work.
Drawings, models, calculations, contracts and site data are all knowledge artifacts. Over the past year I have embedded AI tools into some areas of my practice to automate repetitive tasks and enhance efficiency, without displacing the engineering judgment that sits at the end of every workflow. Here are four (4) such scenarios.

Photogrammetry and reality capture

Photogrammetry involves the creation of precise 3D models using overlapping 2D photographs. My photogrammetry pipeline begins with drone capture of existing infrastructure and ends with point cloud variants suited to different uses most especially, decimated clouds for federation in Navisworks and Autodesk Construction Cloud, textured meshes, and 2D sections for drawing production. AI supports the workflow at three points: pre-flight, where checks ground sampling distance, image overlap and battery budget against the survey brief; processing using tools like RealityScan, and scan-to-BIM, where features are extracted for engineering decision making. The result is a faster path from site to as-built modeling. The applications are endless, but I've found my favourite to be construction progress tracking.

BIM and Revit Dynamo

Dynamo for Revit is a visual programming environment built directly into Autodesk Revit. It uses nodes and wires rather than traditional text-based codes and allows automation of repetitive tasks within the Revit environment. I use AI as a co-author for these scripts to enhance parameter read/write across families, sheet and view automation, room and space data extraction to Excel, batch element renaming, and clash coordination workflows.

FIDIC contract management

Contract administration under FIDIC suite contracts is procedural, deadline-driven and unforgiving clause-numbered notices, time-barred claims and a Dispute Avoidance/Adjudication Board regime that rewards rigour. I built a multi-sheet interactive contract management tracker which has now been upgraded into a working .html platform for the FIDIC Red Book, Yellow Book and Silver Book (2017) with AI assistance, covering project setup, key dates and milestones, claims and notices register, variations, payments, the extension-of-time register, DAAB matters, and a live dashboard. A tool that would have taken weeks to specify and build manually was generated, reviewed and deployed in a few working day thanks to AI.

Continuous Professional Development

AI has also reshaped how I structure long learning arcs. A vague intent to "get good at Contract and BIM management" becomes a sequenced, deliverable-anchored programme: Phase 1 covers FIDIC fundamentals and ISO 19650 basics; Phase 2 builds federated-model coordination and clash detection; Phase 3 goes deep on Exchange Information Requirements, BIM Execution Plans, Master Information Delivery Plans, Common Data Environments in ACC, and Level of Information Need per ISO 7817; Phase 4 integrates Autodesk Forma and the wider AEC Collection in a project. AI does not replace the reading, the standards or the practice, but it converts intent into a calendar.

The takeaway

AI is not an oracle and is not autonomous. Every output is reviewed against codes, site reality and engineering judgment before it leaves my desk. Naming the standard — FIDIC Red Book 2017, Eurocode 2, ISO 19650-2, produces dramatically better results than clever prompting, and safety-critical maths is always re-verified by hand. Used this way, AI is leverage. It enhances efficiency and frees up time for critical work.

Ghana Institution of Engineering Newsletter

Don't just read it - be part of it!

This newsletter is compiled and produced by the Newsletter, Website, and Magazine Sub-Committee of the Ghana Institution of Engineering's Publications Committee: Ing Joseph Xavier Francisco Ribeiro (Ph.D.) • Ing Prof. Emmanuel Kwame Appiah-Adjei • Ms. Augustina Nyarkoa Amoateng • Ing Miriam Korantema Amponsah • Ing David Addae • Ing Daniel Asseh Allan • Ing Kwame Sakyi-Bekoe • Ing Leonora Otu - Boateng
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