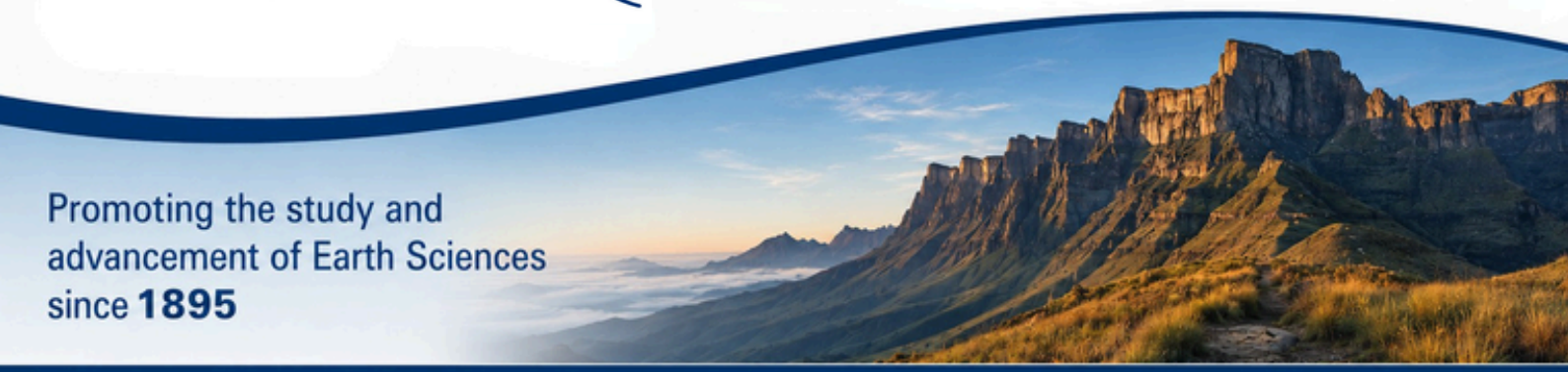
NEWSLETTER

JUNE 2026 | **ISSUE 141**

Geological Society of South Africa



Promoting the study and advancement of Earth Sciences since **1895**

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INSIDE THIS ISSUE:

NOLEEN PAULS

GSSA PRESIDENT

JUNE IN REVIEW

As we celebrate Youth Month, we are reminded that the future of our profession rests in the hands of the next generation of geologists. This month's events provided an opportunity not only to reflect on the importance of investing in young people, but also to actively engage in conversations about how we can make geology an attractive, accessible, and rewarding career.

One of the highlights of the month was the insightful panel discussion held during Seequent Day, where I and fellow panelists focused on the exploration, attraction and retention of young people within the geoscience sector.

The discussion brought together perspectives from industry, academia and early-career professionals, highlighting both the challenges and opportunities facing our profession. From improving awareness of geology as a career to creating supportive workplace environments and meaningful mentorship opportunities, it was encouraging to see the commitment across our community to ensuring that young geologists not only enter the profession but thrive within it.

As a Society, we recognise that developing future geoscience leaders requires more than technical training. It requires creating pathways for growth, embracing innovation and equipping our members with the skills needed to navigate an evolving industry.

In this spirit, the GSSA hosted its AI for Geologists Workshop, providing attendees with practical insights into how artificial intelligence is transforming geological workflows. The workshop explored the growing role of AI in data analysis, interpretation, modelling and decision-making, while also encouraging participants to think critically about how these technologies can complement—not replace—the expertise and judgement of geoscientists. The enthusiastic participation demonstrated the profession's willingness to embrace innovation while remaining grounded in sound geological principles.

As technology continues to reshape our industry, the GSSA remains committed to providing opportunities for continuous professional development that prepare our members for the future. By combining innovation with mentorship and a strong sense of community, we can ensure that geology remains an exciting and relevant profession for generations to come.

As we encourage the next generation of geologists to embrace new ideas and technologies, it seemed only appropriate that this column should do the same. Yes—it was written by ChatGPT. With just a little input from me. Perhaps that's the best demonstration yet of what responsible human–AI collaboration can look like.

I would like to thank everyone who contributed to these successful initiatives and encourage all our members to continue supporting young professionals, sharing knowledge and embracing lifelong learning. Together, we are building a stronger, more resilient geoscience community.

Noleen Pauls

REGISTER NOW

THE POWER OF SHOWING UP: WHY IN-PERSON NETWORKING STILL MATTERS

In an era where professional connections can be made with a click, it's easy to assume that online platforms are enough to build a career. But for young professionals and students in the geosciences, **in-person networking remains one of the most powerful catalysts for growth, opportunity, and belonging.**

Across the GSSA's branches and events, something happens that no digital space can replicate: real conversations, shared experiences, and the subtle but vital human cues that build trust. A brief chat after a talk, a question asked during a field excursion, or an introduction facilitated by a senior member can open doors to mentorship, postgraduate pathways, internships, and first jobs.

For students and early-career geoscientists, these moments are especially important. In-person events help you practise professional confidence, learn how to present yourselves, and become visible within the community. You also gain access to the informal wisdom of seasoned geologists — the field stories, career lessons, and practical insights that rarely make it into textbooks or online posts.

Just as importantly, attending GSSA events helps young members feel part of something bigger. It strengthens the intergenerational fabric of the Society and ensures that knowledge, leadership, and opportunities continue to flow forward.

As the GSSA continues to grow its support for emerging professionals, one message remains clear: showing up matters. When young geoscientists step into the room — whether it's a branch meeting, a technical talk, or a conference — you are not just attending an event. You are investing in your future, and in the future of the profession.

GSSA

Geological Society of South Africa

2026 CALENDAR OF EVENTS

16 JULY	GSSA AGM	HYBRID
29 JULY	Beyond the Rocks – Essential Skills for Geoscientists	ONLINE ONLY
4 AUGUST	Field-to-Findings: A Complete Course in Drilling, Sample Handling, and Result Interpretation	ONLINE ONLY
AUGUST	Minerals Resource Mastery	ONLINE ONLY
8 SEPTEMBER	Professionalism & Code of Ethics Workshop	ONLINE ONLY
10 – 13 SEPTEMBER	Lichtenburg 100	IN PERSON ONLY
19 & 20 SEPTEMBER	Structural Geology Course & Field trip	IN PERSON ONLY
8 & 9 OCTOBER	Data Analytics & Machine Learning	ONLINE ONLY
20 & 21 OCTEMER	Advanced SAMCODES Workshop	IN PERSON ONLY
18 & 19 NOVEMBER	African Exploration Showcase	HYBRID

More information and Registration click here

IMPORTANT WEBSITE NOTIFICATIONS

When you log into your dashboard on the website, you will see this sign – it means that there is some important information regarding your account that we need you to take care of.

Currently there are two notifications:

1. A reminder to update your account details, especially your contact details (cellphone and a current email address). This is especially important if you have changed employment or retired. Please also ensure that your membership status is correct. Please send updated information to accounts@ssa.org.za and admin@gssa.org.za

2. If you have logged in, but have no access to SAJG or your CPD, it means that your account has been locked. This may be as a result of outdated information or simply website gremlins. Please contact admin@gssa.org.za for assistance in unlocking your account so that you can continue to enjoy all the facilities of our new website.

TELL US WHO YOU ARE

Would you like the membership/general public to know more about who you are? For example, are you a geophysicist, a consultant, a mine geologist, etc.

For those who would like to add some detail, please log on to your profile, go to your account (under Apps), select the “Employment” tab and fill in the “Badge Display” field.

Your badge will then display this additional information when people look you up on the website.

Innov-X Africa is a leading provider of advanced analytical, exploration, and mining technology solutions across Africa. With a strong presence throughout the continent, Innov-X Africa partners with world-renowned manufacturers to deliver cutting-edge instrumentation and technical expertise to the mining, environmental, geological, and industrial sectors.

For over two decades, Innov-X Africa has supported clients throughout the exploration and mining value chain, offering solutions that improve efficiency, increase productivity, and drive data-driven decision-making. From field exploration and resource development to mine operations. Innov-X Africa provides the tools and support needed to achieve reliable results and delivers innovative solutions that help organizations make faster, more informed decisions in the field and laboratory.

With expertise spanning portable XRF analysis, core scanning, spectroscopy, and geochemical solutions, Innov-X Africa supports customers throughout the entire mining value chain.

Known for its technical expertise, responsive support, and commitment to customer success, Innov-X Africa continues to empower Africa's mining and exploration industries with world-class technology and local knowledge. We are proud to provide cutting-edge solutions that improve efficiency, enhance data quality, and drive smarter decision-making across Africa's resource sector.

Pictured above (from left to right): Jacques Nel, Nicolene Makuwa, Dominic Muroa.

MAPTEK - LEAVING NO ORE UNCOVERED

As a global provider of innovative software, hardware and services, Maptek combines deep mining domain knowledge with technical expertise and engineering excellence to help customers make better decisions across the mining value chain.

Since 1981, Maptek has been at the forefront of mining technology, growing from a small geological database services team in Sydney into a global technology company with over 30,000 licenses sold.

Maptek provides a comprehensive suite of digital geological solutions designed for the mining sector, linking 3D geological modelling, machine learning, spatial analysis, and mine planning.

The company's flagship Vulcan solution provides advanced geological modelling, mine design and production planning capabilities. Mining companies across all commodities can apply Vulcan software to validate and transform technical data into dynamic models, accurate mine designs and operating plans.

In 2021, Maptek launched DomainMCF, which applies machine learning to generate domain boundaries directly from sample data for rapid creation of resource models. Geologists feed in drilling or other sampling data and obtain domain or grade models in dramatically less time than traditional resource modelling methods.

Maptek GeologyCore was also released in 2021 with the goal of streamlining the geological modelling workflow. The solution includes workflow-driven tools to load and validate geological data, define geological domains, and generate, validate and publish geological models. GeologyCore integrates seamlessly with Vulcan and includes 3D visualisation and lithology targeting tools.

Through integrated decision-support solutions, Maptek is helping to reshape the way mining is done by enabling miners to make better decisions - an ethos embraced by the company's more than 400 employees worldwide, including around 30 in its Johannesburg office.

It is Maptek's belief that collaboration is essential for the future success of the resources sector, and that industry, governments and academia must work together to ensure future success. The company is fully committed to supporting future mining professionals to prepare for their careers, with thousands of graduates globally having experienced hands-on learning through Maptek's multifaceted academic program.

Maptek has longstanding partnerships with regional universities, such as Wits University and the University of Pretoria, which derive great value from online training modules and programmes allowing students to learn at their own pace. Courses are created by mining professionals giving detailed, carefully-organised, lessons based on industry experience and everyday challenges.

Empowering mining professionals by putting desktop software into their hands has underpinned the success of Maptek since its inception. As the company celebrates its 45th year, Maptek is proud to partner with GSSA as an annual sponsor for the second consecutive year, helping to advance geosciences across South Africa.

To learn more about Maptek's geology and mining solutions, contact the Southern Africa team.

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FROM PAPER LOGS TO DIGITAL LOGGING: BUILDING A GEOLOGICAL FIELD PLATFORM FROM THE FIELD UP

Talifhani Junior Khomola | BSc Geology & Geography, North West University | Research Associate, University of the Witwatersrand

It starts on a drill site somewhere in Limpopo. The sun is up early, the core trays are already lined up, and somewhere between your first smell of diesel engine and the second metre of core, you realise something: the most important data you will collect today is going to end up in a PDF that no one can query, a spreadsheet with mismatched column headers, core pictures that'll probably end up on WhatsApp, or a handwritten field book that will sit in a cabinet until someone needs it captured on excel and probably not find it even months after.

That realisation changed the direction of my career. Not away from geology, but deeper into it.

The Problem That Kept Surfacing

I spent eighteen months as a Graduate Engineering Geologist at a Geotechnical consulting firm working on core drilling projects, RMR assessments, geotechnical profiling, and slope investigations involving CPTu and finite element analysis. The work was technically demanding and deeply rewarding. But one thing remained constant across every project: the data pipeline was proving inefficient.

Field data was collected on paper, transcribed into spreadsheets, summarised in reports, and then effectively frozen. There was no easy way to query a borehole log programmatically, compare rock mass ratings across a project, or visualise stratigraphic contacts in three dimensions without manually rebuilding everything from scratch. The geotechnical software that existed was either prohibitively expensive, inflexible, or not designed for the realities of South African field practice.

I kept asking the same question: why does this still work this way?

Building the Answer

I started building GeoLogs Pro in 2024 as a solo project, initially a mobile app, eventually a full-stack platform. The goal was straightforward: digitise the geotechnical field workflow from data capture to 3D visualisation, without requiring a geology firm to spend a six-figure sum on legacy software.

What started as a RMR89 and Q-system calculator grew into something I did not fully anticipate building. The platform now includes:

- Structured borehole logging with automated PDF report generation
- A 3D viewer built with Three.js, supporting real borehole geometry and stratigraphic interpolation
- An Ordinary Kriging pipeline running and producing analysis-ready models
- A Random Forest classifier for rock mass classification from field parameters
- A Python package (parseplot) — published to PyPI, for parsing legacy borehole PDFs into GIS-ready CSVs

What the Field Teaches You That the Classroom Cannot

There is a version of this story where I waited until postgraduate study to engage with research-level problems. I did not take that route, and I think the field experience made the difference.

Working on real projects with real budgets, real deadlines, and real consequences for bad data forces a kind of problem-solving that is difficult to replicate in an academic setting. You learn quickly that elegant theory and practical implementation are two different things. A stratigraphic interpolation algorithm that looks correct on paper will still violate the Law of Superposition if you do not account for how field geologists actually describe contacts. You only know that if you have stood next to a core tray and described contacts yourself.

That intersection and domain knowledge meeting technical implementation is where I believe the next generation of geoscience tools will be built.

Where This Is Going

I recently joined the University of the Witwatersrand as a Research Associate in the School of Geosciences, contributing to the BUGEMET Research Project. The move from industry into research feels like a natural progression: the questions I was asking in the field have not changed, but the environment for investigating them rigorously has expanded.

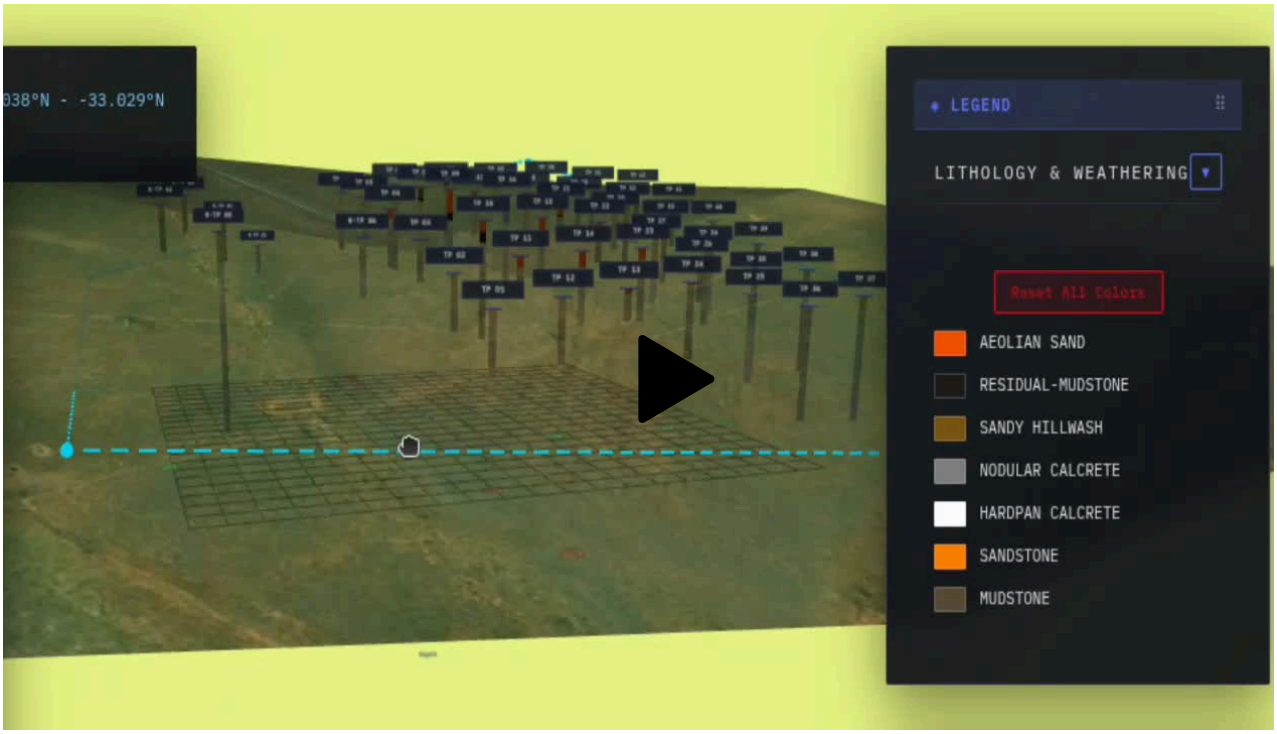
The broader challenge I am working toward is this: South African geological field practice generates enormous volumes of subsurface data that is currently siloed, unstandardised, and underutilised. Machine learning applied to that data rock mass classification, minerals exploration, failure mode prediction, subsidence risk modelling is not science fiction. It is an geological problem that requires people who understand both the subsurface and the tools.

A Note to Other Students

If you are a geology or geoscience student reading this and you have ever thought about building something, a tool, a script, a small application that solves a problem you keep running into. I would encourage you to start.

You do not need to know everything before you begin. I learned Python, Flask, JavaScript, and spatial data processing mostly by building things that did not work yet, and then figuring out why, and reaching out to industry professionals to assess relevance of the direction I am building towards. The domain knowledge you are acquiring in your degree is the hard part. The technical skills are learnable, and they are increasingly expected.

The data crisis in geoscience is real. The people best positioned to solve it are geoscientists who can also build.



The GSSA offers far more than membership , from mentorship programmes and CPD training to networking events, conferences, research access, and career development opportunities for geoscientists at every stage.

Young professionals under 35 can also benefit from dedicated support through the Young Geoscience Professionals group, designed to help grow skills, connections, and careers in the geoscience industry.

Why you should publish in the South African Journal of Geology

The journal of record for African geology

FLAGSHIP PUBLICATION OF THE GSSA

The South African Journal of Geology (SAJG) is the flagship publication of the Geological Society of South Africa (GSSA), with as its main purpose the publication of peer-reviewed, scientific papers, notes and discussions about the geology of the African plate.

A PROUD HERITAGE

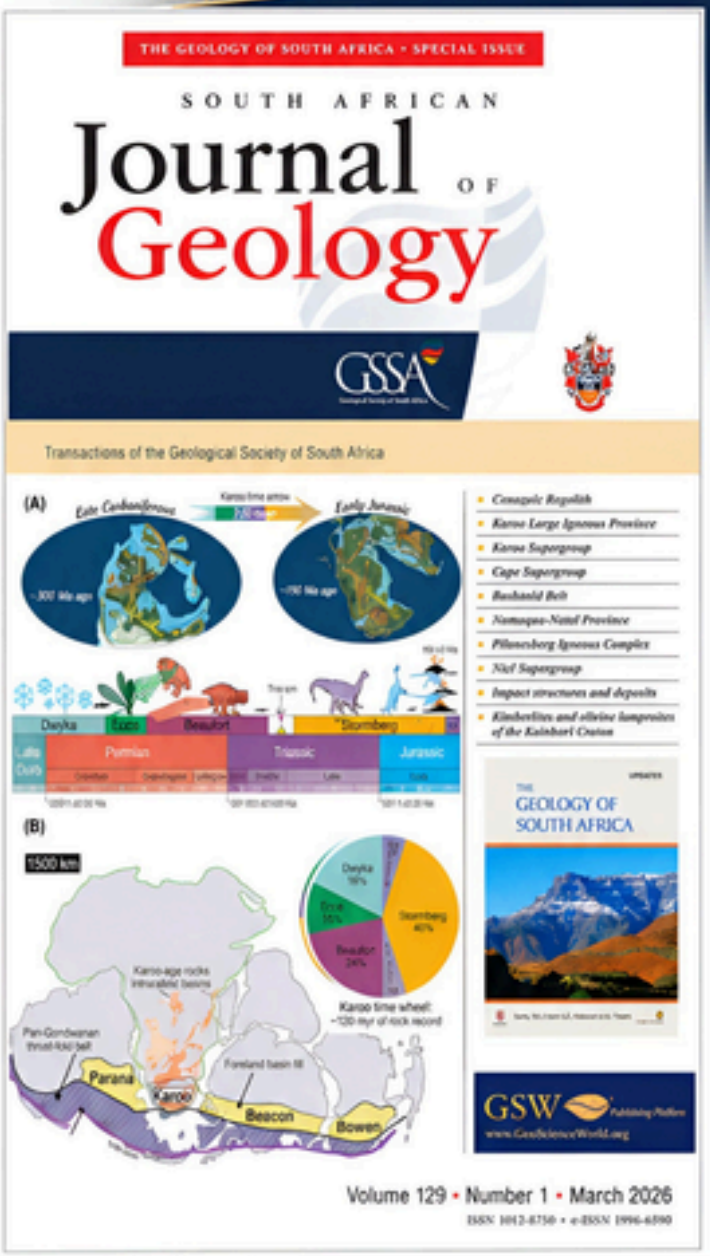
The SAJG has been continuously published, until 1987 as the Transactions of the GSSA, since 1895. We are proud of this heritage and do our utmost to keep the journal as a high-quality scientific publication that is the 'journal of record' for African geology. Our efforts are reflected in the journal impact factor of 1.4, and our position as a Q2 (quartile-2) publication - up from a Q3 position less than a decade ago. However, we can only maintain our standing and improve further thanks to **YOUR** submissions!

HYBRID JOURNAL

The SAJG is a hybrid journal, accessible by subscription, but with an option to publish Open Access at a charge of ZAR 10 000 (South African researchers) to ZAR 15 000 (others) - a fraction of what it costs to publish in certain less reputable journals. All papers are freely available to members of the GSSA and on subscription via GeoScienceWorld (GSW).

EDITORIAL TEAM

The current SAJG editorial team comprises a Scientific Editor (Professor M.A. Elburg), a Technical Editor (Mr M. Knoper) and a Managing Editor (Dr G. Henry). We are proud of our record for a quick and efficient publication process, from manuscript submission to final on-line publication, with the speed of publication generally limited by the time it takes the authors to do their revisions. We encourage all researchers working on aspects of African geosciences to publish with us and be part of our proud heritage going forwards.



WIDELY ACCESSIBLE AND GLOBAL REACH

All papers are freely available to members of the GSSA and on subscription via Geoscience World (GSW), extending the reach of your research to a global audience

We welcome your contributions!
For enquiries or submissions, contact us at marlinae@uj.ac.za

SAMCODES SNIPPETS

The Makeup of the SSC (GASA, SAICA and IASSA)

In the third in our series of organisations that sit on the SAMCODES Standards Committee (SSC), we take a look at the Geostatistical Association of South Africa, the South African Institute of Chartered Accountants and Investment Analysts Society of South Africa.

Geostatistical Association of South Africa (GASA)

The Geostatistical Association of South Africa (GASA) plays a foundational role in the development and ongoing refinement of the SAMCODES, particularly the SAMREC Code for reporting mineral resources and reserves. Formed to promote the study and practical application of geostatistics, GASA represents the professional interests of geostatisticians across mining, petroleum, and related industries. Its members are deeply involved in the technical backbone of mineral resource estimation — the quantitative science that underpins public reporting standards.

Historically, GASA's involvement with SAMCODES dates back to the early 1990s, when the Geological Society of South Africa (GSSA) convened a committee, including GASA representatives, to draft the first South African Code for reporting mineral resources and reserves. This collaboration led to the SAMREC Code, which was later incorporated into the JSE Listings Rules and became a cornerstone of transparency and accountability in the South African minerals sector. GASA's contribution ensured that the Code reflected rigorous statistical principles, sound estimation methodologies, and internationally aligned definitions consistent with the Denver Accord of 1997.

Today, GASA continues to advocate for best practice in geostatistical modelling, uncertainty quantification, and resource classification. It promotes professional development through seminars, workshops, and partnerships with universities and the GSSA. Its members often serve as Competent Persons under SAMREC, responsible for ensuring that mineral resource statements are defensible, reproducible, and compliant with the Code's standards.

READ MORE

HOW TO DOWNLOAD YOUR GSSA MEMBERSHIP CARD

Follow these simple steps to download and save your GSSA membership card.

SCAN TO GO TO THE GSSA WEBSITE

https://www.gssa.org.za/account/identity

Sign in to your GSSA Account.

1 NAVIGATE TO THE GSSA WEBSITE

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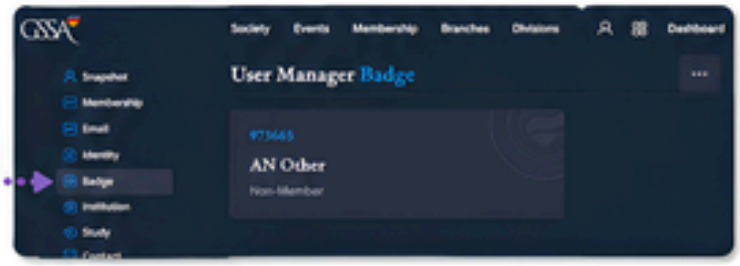

2 GO TO YOUR BADGE SECTION

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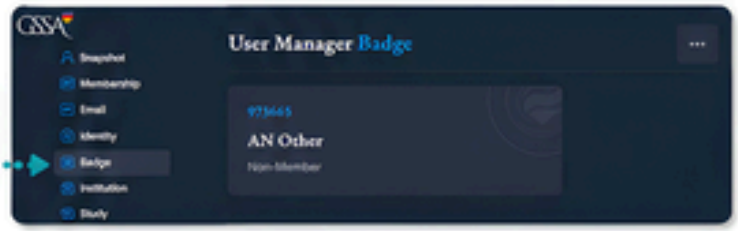

3 CLICK THE THREE DOTS

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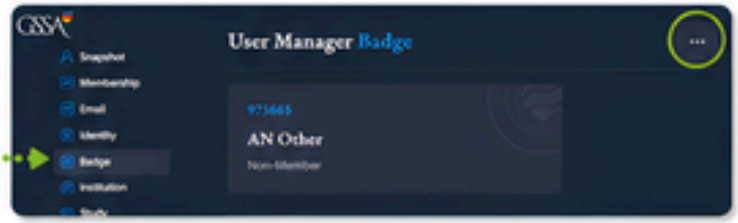
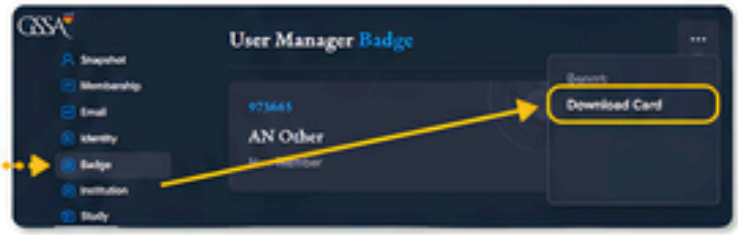


4 THEN CLICK DOWNLOAD CARD

From the menu that appears, click Download Card.



5 YOUR CARD WILL BE DOWNLOADED

This will download your membership card as a file.

6 SAVE YOUR CARD TO YOUR COMPUTER

Save the downloaded file to your computer so you can use it later.

7 KEEP YOUR DETAILS UP TO DATE

While you're here, make sure your membership details are up to date.

SMILE. YOU'RE DONE!

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