Magmatism and Geodynamic context

Agate/WAXI Training

25th - 30th April 2023 Abidjan / Toumodi, Côte d'Ivoire

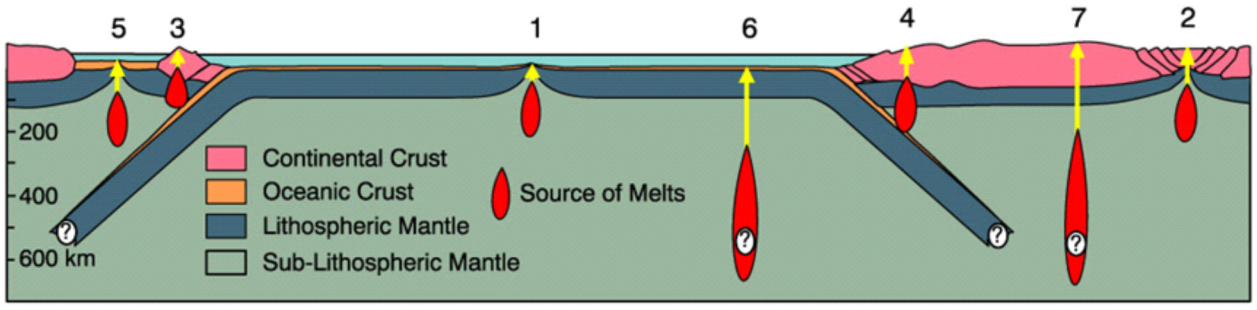
This 6-day course will familiarise participants with the tools and methods of igneous rock investigation. During the course and at the end of the course, they will develop skills that will enable them to analyse and interpret the principles and processes involved in the genesis and evolution of these rocks.

In particular, participants will be able to use chemical data to characterise the different trends that can be observed. They will know how to relate these trends to the geodynamic context of the rocks' emplacement.

This course is aimed at geologists who wish to improve their skills in modern petrology.

It will be organised by Ousmane WANE, PhD (USTT Bamako) and Alain Kouamelan, PhD (UFHB), who have more than twenty years of teaching and research experience in their respective countries, Mali and Côte d'Ivoire.

Participants will be trained on case studies using data from the region, and are encouraged to bring their own regional data sets.



Programme

Day	Course Element	Lecturer
Day 1 **25/04**	1: Earth's Interior and magmas Introduction/ The Earth's Interior/ General characteristics of magmas/ Main rock melting mechanisms/ Magmatic differentiation/ Magma generation and plate tectonic setting/ Worked examples 2: Classification and Nomenclature of Igneous Rocks Introduction/ Textural Classification/ Silica content Classification/ Classification using alumina saturation/ Classification based on Colour index/ The IUGS Classification/ The CIPW Classification/ Worked examples	O. Wane A.N. Kouamelan
Day 2 **26/04**	3: The geochemistry of Major and Minor Elements Introduction/ Analytical methods and results/ Major and Minor Elements/ Binary Diagrams/ Ternary Diagrams/ Magma series/ Worked Examples 4: The Geochemistry of Trace Elements Introduction/ Chemical affinity of Trace Elements/ Distribution of Trace Elements/ Rare Earth Elements (Chemistry, REE patterns, Spider diagrams)/	O. Wane A.N. Kouamelan
Day 3 **27/04**	Discrimination diagrams/ Worked Examples 5: The Geochemistry of Isotopes Introduction/ The Rb-Sr System/ The Sm-Nd System/ The U-Pb System/ Using isotopes as a tracer of magma sources/ Worked examples	O. Wane A.N. Kouamelan
Day 4 **28/04**	Chapter 6: Magmatism and Geodynamic Context Introduction/ Magmatism at Divergent Boundaries (Petrography, Geochemistry)/ Magmatism at Convergent Boundaries (Petrography, Geochemistry)/ Intraplate Magmatism (oceanic and Continental) (Petrography, Geochemistry)/ Worked examples Depart for Toumodi - overnight at Toumodi	O. Wane A.N. Kouamelan
Day 5 **29/04**	Field Trip- Toumodi overnight at Toumodi	O. Wane A.N. Kouamelan
Day 6 **30/04**	Field Trip-Toumodi Return to Abidjan	O. Wane A.N. Kouamelan

Information

Course Leader: Ousmane Wane and Alain Kouamélan

Ousmane WANE is a senior lecturer, who graduated from the University of Lille 1 (France) in the field of Geosciences. He was the Head of the Department of Teaching and Research of Geology, of the University of Sciences, Techniques and Technologies of Bamako (USTTB), from April 2011 to February 2020. He is the Head of the Laboratory of Mineralogy and Petrology and the Responsible of the Master of Applied Geology of USTTB. He has more than twenty years of experience in the field of teaching and research.
He is currently a Petro-structuralist expert in the Project of Technical Support to the Mapping of the Birimian of southern Mali at the Scale of 1:50 000, which will produce 19 geological maps.

Alain Kouamelan, PhD is a Senior Lecturer at the UFHB in Abidjan-Cocody since February 2002. Prior to this, he worked for four years at Normandy Mining (acquired by Newmont Mining in 2002) as a mining exploration geologist in Côte d'Ivoire. He is currently coordinating a mapping project that will produce the first 1:50,000 scale geological map of an area in the Fétékro Trench in central Côte d'Ivoire.

Registration Fees

WAXI Sponsors US$1,500 per attendee - Non-WAXI sponsors US$1,800 per attendee
Let us know if your company can provide a vehicle for the duration of the field trip from Abidjan and back. Discount will apply.

Price includes	*Price does not include*
Lunchtime meals, morning afternoon tea	*Evening meals, accomodation, (we can help with booking)*
Training material, tranport to field trip destination and back.	*Flights, transport to and from Abidjan*

Language

French

Duration

6 days: 4 days lectures (Abidjan) + 2 days field trip (Toumodi)

Time

Abidjan, Cote d'Ivoire – 9 am to 5 pm

Registration

Register and pay online on the Agate website, or using the form on the next page.

Certificate of Attendance

Upon completion, participants will receive a certificate of attendance

AGATE PROJECT

Knowledge, Skills, Networks in Earth and Planetary Science

AGATE/WAXI Magmatism and Geodynamic context Course

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complete and return this form

Company .....

Address .....

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Phone .....

Administrative Email contact .....

Attendee's Name 1.....

Attendee's Name 2.....

Attendee's Name 3.....

Attendee's Name 4.....

Total Registration Fees .....

Invoice adressed to:.....

Can your company provide a 4x4 vehicle for the duration of the field trips? discount will apply: .....

US$1,500 per person for WAXI sponsors &

US$1,800 for non-WAXI sponsors

Email: Corinne.Debat@agate-project.org

On confirmation of your places, we will ask you to transfer the registration fee to a bank account to be announced. Registration valid only when the invoice is paid in full