



SOCIETY OF ECONOMIC GEOLOGISTS, INC.

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E-mail: studentprograms@segweb.org

Student Chapter Annual Report Form

This form is used to report on Student Chapter activities over the previous year. The report provides a useful medium to document the status and progress of individual chapters. Annual Reports are used to evaluate applications for SEG support and to keep information up-to-date on the SEG website. Please provide a summary of chapter activities in a concise form as suggested below. Description of programs may be supported by a limited number of photographs and figures in a format appropriate for publishing on our website.

Submission Deadline: September 30th

Submit to: studentprograms@segweb.org

Month/Year Reported: From 10/2019 (mm/yyyy) – To 10/2020 (mm/yyyy)

Chapter Name: Imperial College London

Chapter Mailing Address: Royal School of Mines, Prince Consort Rd, Kensington, London SW7 2BP

Chapter E-mail: segatic@ic.ac.uk

Chapter Website: http://www.imperialseg.org.uk/

Chapter Facebook: fb.com/Imperial-College-London-SEG-Student-Chapter-1761262657515746/

Chapter Executive Committee (in office during the time frame captured on this report) (type "Vacant" if position not filled):

President:	<u>Daniel Keogh</u> Name	<u>daniel.keogh16@imperial.ac.uk</u> E-mail
Vice President:	<u>Joe Fletcher</u> Name	<u>joe.fletcher16@imperial.ac.uk</u> E-mail
Secretary:	<u>Holly Andrews</u> Name	<u>holly.andrews16@imperial.ac.uk</u> E-mail
Treasurer:	<u>Ana-Maria Mikhail</u> Name	<u>ana.Mikhail17@imperial.ac.uk</u> E-mail

Chapter Academic Sponsor (SEG Fellow membership in good standing):

Jamie Wilkinson Name j.wilkinson@nhm.ac.uk E-mail +44 2079425334 Phone

Address _____ Fax _____

Chapter Industry Sponsor (SEG Fellow membership in good standing and not affiliated with the student chapter's institution):

Richard Herrington Name r.herrington@nhm.ac.uk E-mail _____ Phone

Department of Earth Sciences, Natural History Museum, Cromwell Road Address _____ Fax

Sponsoring Institution or Company (name): Imperial College London

- Attach:** 1. a list of names of *all* Student Chapter members (please indicate by * if SEG Student Member).
 2. complete Student Chapter Membership Information form with the current Executive Committee listed on page 1.

On a separate page(s) provide a summary of student chapter annual activities:

- Regular meetings, lectures
- Field trips (dates, area visited, field trip leaders, number of participants, sponsors, benefits for students).
Note: this is not the place for a detailed field trip report that is required from a chapter who has received funding from the Stewart R. Wallace Fund.
- If your chapter received funding from the Stewart R. Wallace Fund, please submit a separate actual accounting of how chapter funds were spent/used.
- Organization of conferences, workshops, short courses (theme, number of participants, benefits for students)
- Participation in conferences, workshops, short courses (theme, number of participants from the chapter, benefits for students)
- Fund-raising programs
- Other programs
- Future plans

Aug2015VS

Imperial College London SEG Student Chapter

Annual Report 2019-20



By Joe Fletcher



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Mission Statement

The Imperial SEG Chapter aims to give students a deeper insight into economic geology, beyond what is taught in lectures. Throughout the year, we hold a multitude of events to cater to everyone's needs. Our monthly seminars provide the opportunity to hear industry, and academic professionals speak about their experiences and expertise. The annual Students into Mining Symposium gives vital information about how to enter and succeed in the mining sector and provides networking opportunities. We host leapfrog courses, offering students a chance to gain useful skills in 3D geological modelling. Most importantly, our highlight of the year is the annual international trip, which has taken students to Peru (2019), Namibia (2018), Morocco (2017), Eastern Europe (2015) and South Africa (2014). These field trips have all had significant success and provided a unique opportunity for students to visit outstanding areas of economic geology.

Outgoing Committee 2019-20

President	Daniel Keogh	dan.keogh26@gmail.com
Vice President	Joe Fletcher	joe.fletcher16@imperial.ac.uk
Secretary	Holly Andrews	holly.andrews16@imperial.ac.uk
Treasurer	Ana-Maria Mikhail	ana-maria.de-souza-mikhail17@imperial.ac.uk
Industrial Liaison	Maddie Laidlaw	madeleine.laidlaw17@imperial.ac.uk

Incoming Committee 2020-21

President	Alfie Baines	alfred.baines17@imperial.ac.uk
Vice President	Elin Jones	marged.jones17@imperial.ac.uk
Secretary	Katie McCann	katherine.mccann17@imperial.ac.uk
Treasurer	Ethan Tonks	e.tonks@nhm.ac.uk
Industrial Liaison	Jasmine Crocker	jasmine.crocker18@imperial.ac.uk

Seminars

Every year we invite guest speakers from across the mining industry and academic institutes to give talks within the department to students. Attendees included students and graduates from Imperial and other universities across the United Kingdom and Ireland. Drinks receptions were held after each evening session or lunch provided for midday talks, sponsored by the Department of Earth Science and Engineering, Royal School of Mines and the Imperial SEG Chapter. We have successfully managed to retain attendance at our seminars with 40-50 people in attendance for most talks. We had planned two further talks for the summer term; however, the COVID-19 pandemic prevented these from taking place.

Seminars for the 2019-2020 year included:

Mark Davis Geological Consultant at LithoEconomics LTD. - *Mining in Africa 'Three Pillars'*

John Thompson PetraScience Consultant at Cornell University- *Copper Models and Challenges*



THREE PILLARS
MINING AND THE GROWING ECONOMIES
IN AFRICA

MARK DAVIS- INDEPENDENT CONSULTING
GEOLOGIST AND DIRECTOR AT
LITHO ECONOMICS LTD

5 PM
TUESDAY 12TH NOVEMBER
ROYAL SCHOOL OF MINES - ROOM 1.51

ABSTRACT:
Most of the world's economies are supported by three industries, or pillars. These pillars are usually related to primary industries, mining and agriculture, and not secondary industries, such as banking. This metaphor can be translated into the mining industry itself. The ambiguities of mining in Africa can be attributed to the interference of national and international government, international rules and regulations, and the transition to greener mining methods. This is of particular interest as many geologists and mining engineers who want to be part of the cutting edge of mining are relocated to far flung places, commonly in Africa.

Snacks and drinks provided

Facebook
For more information, email
seg.chapter@imperial.ac.uk

QR code

Imperial SEG Student Chapter

SEG LODE



**COPPER: MODELS AND
CHALLENGES**

JOHN THOMPSON
PETRASCIENCE CONSULTANTS
CORNELL UNIVERSITY

12:00 PM
FRIDAY 29TH NOVEMBER
ROYAL SCHOOL OF MINES - ROOM G20

ABSTRACT:
Mineral deposits models are based on genetic processes and empirical characteristics related to economic concentrations of metals and other elements. Well understood models are consistent with the regional tectonic setting, as well as the localized ore-forming environment for the specific deposit type. Well constrained models also provide the basis for mineral exploration.
Four different styles of copper mineralization that formed largely above 400°C will be discussed to illustrate varying states of knowledge, limitations in terms of process understanding, and challenges related to the application of models to mineral exploration.

PIZZA provided

For more information, email:
seg.chapter@imperial.ac.uk

Imperial SEG

SEGImperial

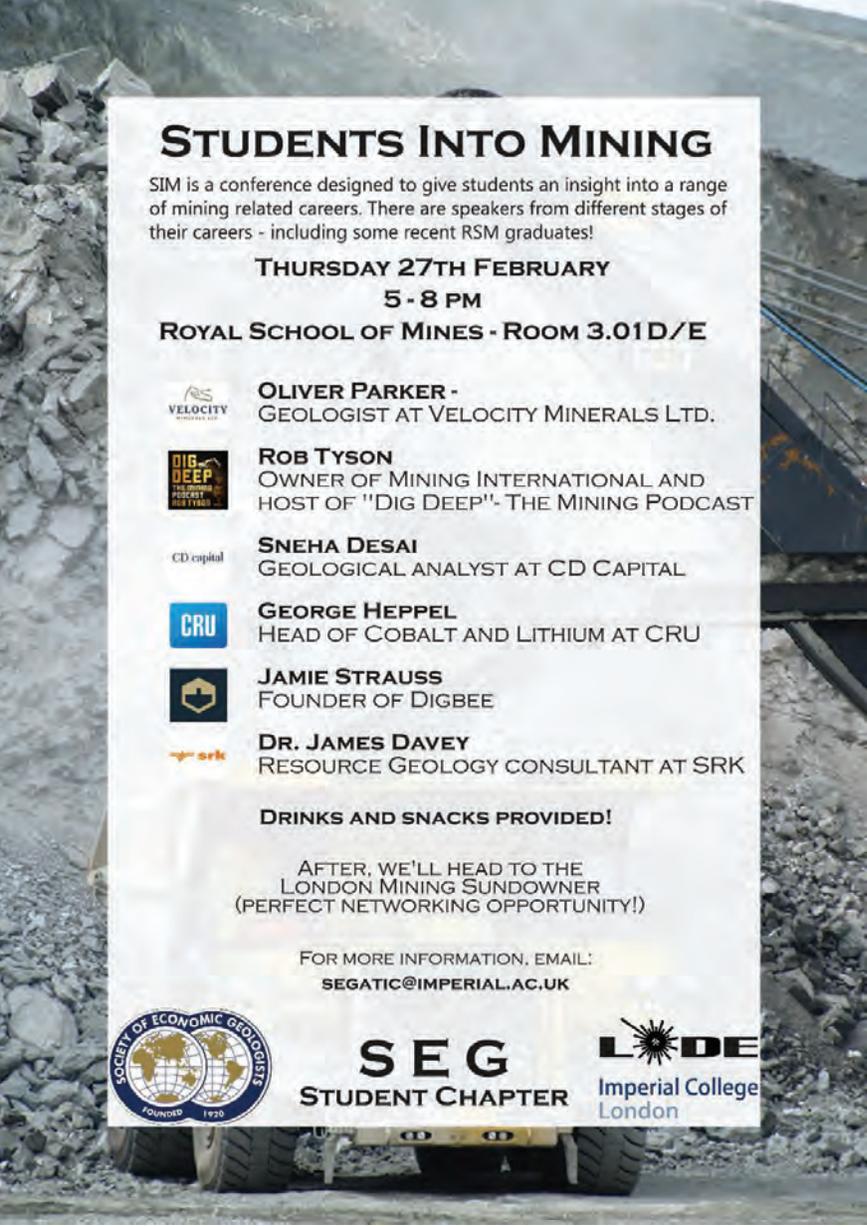
Imperial RSM SEG

SEG LODE

Students into Mining

Our annual *Students into Mining* careers day event is designed to help students learn more about employment in the mining industry and the careers it supports. A range of speakers are invited to cover all aspects from direct geological employment through to consulting, engineering, and finance. Talks are focussed on employment opportunities and career advice.

Held on Wednesday 27th February 2020 at the Royal School of Mines, the event included the following talks:



STUDENTS INTO MINING

SIM is a conference designed to give students an insight into a range of mining related careers. There are speakers from different stages of their careers - including some recent RSM graduates!

THURSDAY 27TH FEBRUARY
5 - 8 PM
ROYAL SCHOOL OF MINES - ROOM 3.01D/E

 **OLIVER PARKER -**
GEOLOGIST AT VELOCITY MINERALS LTD.

 **ROB TYSON**
OWNER OF MINING INTERNATIONAL AND
HOST OF "DIG DEEP"- THE MINING PODCAST

 **SNEHA DESAI**
GEOLOGICAL ANALYST AT CD CAPITAL

 **GEORGE HEPPEL**
HEAD OF COBALT AND LITHIUM AT CRU

 **JAMIE STRAUSS**
FOUNDER OF DIGBEE

 **DR. JAMES DAVEY**
RESOURCE GEOLOGY CONSULTANT AT SRK

DRINKS AND SNACKS PROVIDED!

AFTER, WE'LL HEAD TO THE
LONDON MINING SUNDOWNER
(PERFECT NETWORKING OPPORTUNITY!)

FOR MORE INFORMATION, EMAIL:
SEGATIC@IMPERIAL.AC.UK

 **SEG**
STUDENT CHAPTER

 **LDE**
Imperial College
London

A networking drinks reception was held following the conclusion of the event, sponsored by the Department of Earth Science and Engineering, Royal School of Mines and the Imperial SEG Chapter. 63 people attended this event.



Former RSM student Oliver Parker delivering the opening SIM talk about his first year in exploration.



Dan Keogh (left) and Joe Fletcher (right) presenting bottles of wine to some of the guest speakers.

Networking and Outreach

This year the committee implemented a new LinkedIn group for past and present RSMA SEG members which attracted up 40 alumni in senior mining roles across the world (<https://www.linkedin.com/groups/13780306/>).

New Imperial chapter SEG merchandise was sourced and over £1400 worth was sold to members.



This year we collaborated with other chapters such as Bristol and Leeds. Many members from our club visited the following events:

**Bristol SEG Field Trip:
Cornish Metals and Geothermal Energy**
An opportunity to learn about Cornwall's resources and ongoing exploration

Saturday 30th November - Sunday 1st December 2019
£20 (members)
£25 (non-members, includes membership)
Registration deadline: 5 PM, Wednesday 23rd October

- Learn about Cornish Lithium's exploration programme
- Visit an active drill pad of Cornish Lithium
- Visit the Deep Geothermal Project at United Downs
- Cligga Head Sn-W deposit
- St Agnes mining district
- Chance to interact with industry professionals and fellow students from CSM

There are limited places available. Spaces will be allocated on a first come first serve basis.

University of Bristol
Society of Economic Geologists
Student Chapter

f Bristol SEG @BristolSEG ubuseg@gmail.com

SEG UNIVERSITY OF LEEDS

Volcanogenic massive sulphide (VMS) workshop
Run by Dr Steve Hollis

Programme:
Thurs 7th Nov 2019 at 1:30pm
Earth Visualisation Lab, School of Earth & Environment, University of Leeds

- 1 hour Lecture: An Introduction to VMS deposits and modern seafloor hydrothermal systems
- 45 minute Exercise: Alteration styles and intensities (hand specimens)...
- Fifteen minute break
- 1 hour Lecture: Geochemical and isotopic vectors to VMS deposits
- 1 hour practical exercise: VMS Battleship. Choosing your first and second drill holes.

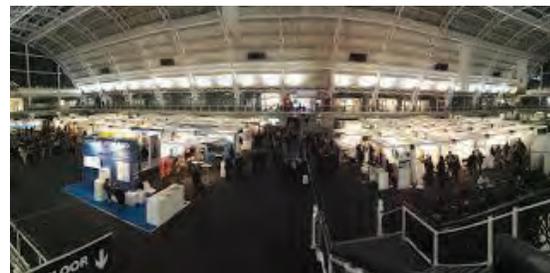
No Registration Fee
Other SEG Chapters Welcome!
Register & Contact: egs@leeds.ac.uk

Follow us on Twitter & Facebook: @SEGLeeds & @OMSLeeds

Dr Steve Hollis is a leading international-based PhD student research fellow on the CRAG New Materials research centre. He completed his PhD at the University of Manchester on the evolution of the 'Serpentinite Complex' in basement rocks and its potential for host VMS mineralisation. He subsequently worked with the major open-pit mine in Cornwall and led a four-year project to locate and drill VMS targets. Since then, Steve has gained experience in VMS mineralisation globally, including Japan and western Australia.

Mines and Money

This year we successfully secured 19 free student tickets to the world-famous Mines and Money conference in London. This allowed participants to attend talks from industry leaders, engage in seminars and network with members of all kinds within the mining industry.



Leapfrog Courses

A four-day Leapfrog course was scheduled at the Royal School of Mines, Imperial College London for 17-20 March 2020 between Imperial SEG and Seequent (Leapfrog developers). However, this event was cancelled due to COVID-19 restrictions and we hope to reorganise for a future date in 2021.

The “Fundamentals of Leapfrog Geo” course was due to have attendees from industry (paid) and five Imperial student geologists (free), who would have been awarded a certificate at the end of the course.



leapfrog[®]

FAST, DYNAMIC GEOLOGICAL MODELLING



SEEQUENT

Australia Field Trip

This year's field trip to Western Australia was cancelled due to the COVID-19 pandemic disruption. We organised visits to a variety of operations, including Greenbushes spodumene Li, Mt Weld REE, and Murrin Murrin laterite Ni-Co mines. The trip was planned to give attendees an overview of the whole mining process; from exploration to smelting.

It is very disappointing that we were unable to carry out the trip as scheduled in September 2020, however, we hope that this itinerary might be picked up by a future committee

IOM³
The Institute of Materials,
Minerals and Mining

**Imperial College
London**
More information?
segatic@ic.ac.uk

The SEG Student Chapter at Imperial College London
presents an economic geology fieldtrip to

AUSTRALIA

 | 8th - 24th
September 2020

Itinerary outline

- Day 1-3: Layover in Singapore, arrival in Perth
- Day 4: UWA Symposium / Rio Rinto Operations Center
- Day 5: Boddington Au mine
- Day 6: Greenbushes, Li-Ta-Sn mine
- Day 7: Koolyanobbing Fe mine
- Day 8: Au superpit
- Day 9: Northern Star Au mine
- Day 10: Wallaby Au mine
- Day 11: Murrin Murrin Ni-Co mine
- Day 12: Mt. Weld REE mine
- Day 13: Ni smelter
- Day 14: Mt. Marion Li-Ta mine
- Day 15: Travel back to Perth, fly back to London

Includes:

- Accommodation
- Flights
- Visitation fees
- Ground transport

Student price: £500

The poster features a map of Western Australia with 15 numbered stops (1-15) indicating the field trip itinerary. Stop 4 is marked as Perth. The background of the poster shows various mining and industrial scenes, including a large open-pit mine, a modern city skyline at night, and workers in a mine.

Summary and 2021 Targets

This year the global COVID-19 pandemic prevented us from reaching many of our projected targets: holding more seminars than 2018/19 covering a wider scope of the mining industry; hosting Leapfrog courses for students, and delivering the annual Field Trip. However, we did succeed in some goals: sending students to mining conventions and conferences in London free of charge (e.g. Mines and Money); connecting with other student chapters (Bristol and Leeds); increasing the exposure of the Chapter (e.g. through merchandise and social media); delivered a successful Students into Mining Symposium; got more a more diverse set of students involved with our activities (increased female participation).

In the upcoming year Imperial SEG aims to:

1. Build on the success of the 2018-19 Leapfrog courses: obtain licences for Imperial students to use alongside their studies, with worked modelling examples provided by Imperial SEG and Seequent.
2. Continue to host the “Leapfrog Fundamentals” certified course within the Royal School of Mines, with sponsored spaces for Imperial SEG members.
3. Increase the number of seminars hosted within the Royal School of Mines, to broaden the horizons of students interested in the mining industry
4. Build on the success of the 2019 Peru field trip, by organising another successful, diverse and affordable trip for students and industry participants.
5. Continue to host London’s *Students into Mining* careers day.
6. Run a free *Mining Fundamentals* course at Imperial College London with the aid of the Natural History Museum. The course will include a series of seminars on ore mineralisation and mineral identification, minerals processing and practical mining-geology skills.

We thank SEG for its ongoing support with our chapter and wish the incoming committee the best of luck, with hopefully only limited COVID-19 disruption.



Daniel Keogh, *President*



Joe Fletcher, *VP*



Holly Andrews, *Secretary*



Ana-Maria Mikhail, *Treasurer*



Maddie Laidlaw, *Industrial Liaison*