

## SusCritMat Summer School for Educators

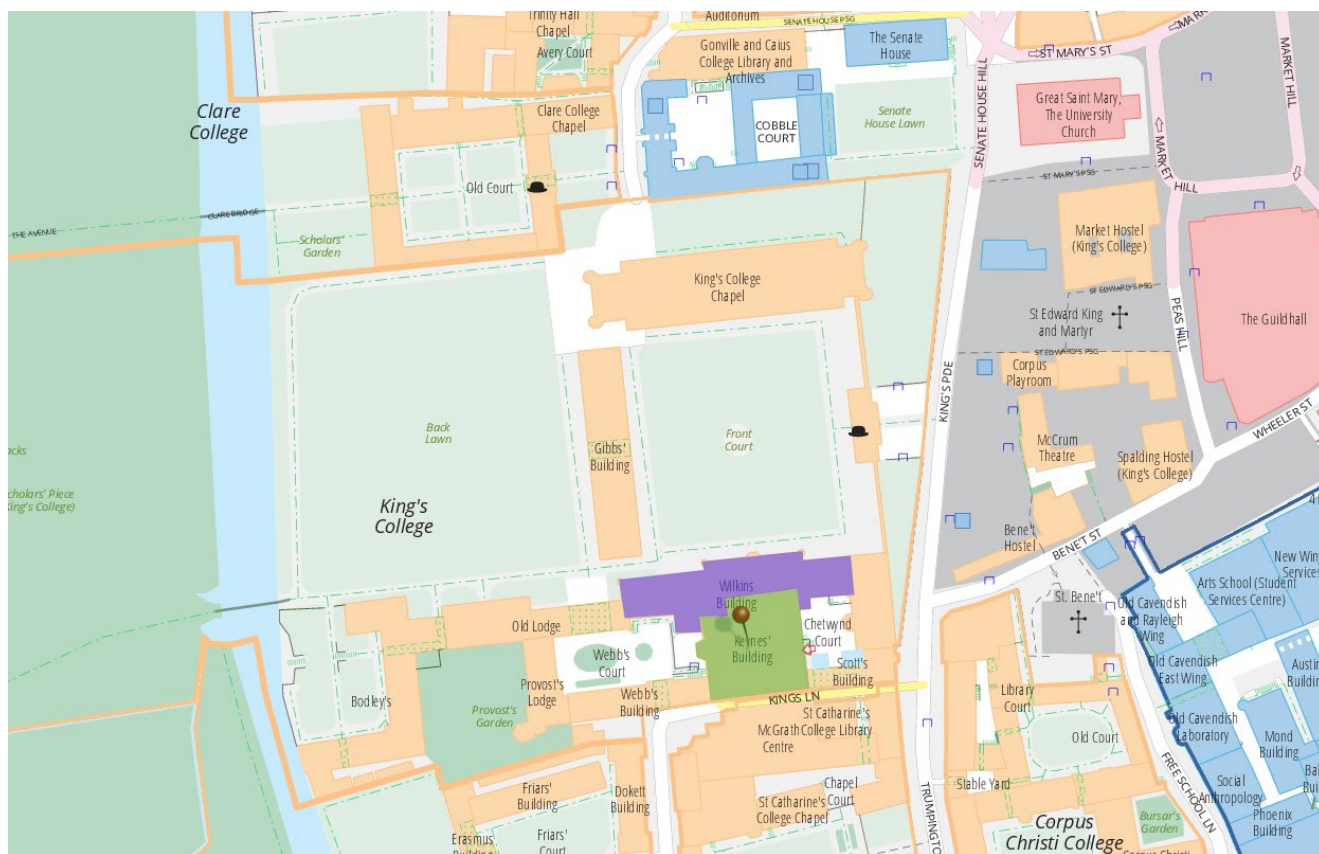
July 10-12, 2019, King's College, Cambridge

### Lecture/workshop room:

Keynes Building (purple on the map)  
Beves room

### Coffee & lunch breaks:

Wilkins Building (green on the map)  
Saltmarsh Reception & Saltmarsh Study



## July 9: Get together

From 18:00 In the Loop game & dinner (optional)  
The Mill Pub, Cambridge  
14 Mill Ln, Cambridge CB2 1RX

## July 10: Introduction to Criticality

08:30-09:00	Welcome coffee		
09:00-09:15	Introduction to the school & its tools	Introduction	Alessandra Hool, ESM Foundation
09:15-09:45	Introduction round, questions to address during the next days	Introduction	All
09:45-10:20	Critical resources for emerging technologies	Lecture	Armin Reller, ESM Foundation
10:20-10:40	Break		
10:40-11:40	Criticality concepts	Lecture	Dominique Guyonnet, BRGM
11:40-12:10	Criticality exercise	Group work	
12:10-12:20	Quiz on criticality	Live Quiz	All
12:20-12:35	Discussion of results	Discussion	
12:25-13:25	Lunch		
13:25-14:00	Geopolitical factors	Lecture	David Peck, TU Delft
14:00-14:10	Quiz on geopolitical factors	Live Quiz	All
14:10-14:25	Discussion of results	Discussion	All
14:25-15:10	Economics of rare metals	Lecture	David Peck, TU Delft
15:10-15:20	Quiz on economics of rare metals	Exercise	All
15:20-15:35	Discussion of results	Discussion	
15:35-15:55	Break		
15:55-16:15	Discussion of the day's contents	Discussion	All
16:15-17:00	Keynote: Tactics for applying the Circular Economy in consumer electronics and polar exploration	Lecture	Matthew Polaine, British Antarctic Survey
17:30-19:00	Historic tour	Group Activity	
From 19:00	Dinner in "The Punter"		

## July 11: Analysis

08:30-09:00	Welcome coffee		
09:00-09:05	Short introduction of the day		Alessandra Hool, ESM Foundation
09:05-09:50	Material Flow Analysis	Lecture	Layla van Ellen, TU Delft
09:50-10:30	Exercise on MFA	Group work	
10:30-10:40	Quiz on MFA	Live Quiz	All
10:40-10:55	Discussion of results	Discussion	
10:55-11:15	Break		
11:15-12:00	Supply & demand scenarios	Lecture	Patrick Wäger, Empa
12:00-12:45	Exercise on supply and demand scenarios	Group work	
12:45-12:55	Quiz on supply and demand scenarios	Live Quiz	All
12:55-13:10	Discussion of results	Discussion	
13:10-14:00	Lunch		
14:00-14:45	Life Cycle Analysis	Lecture	Thibaut Maury, University of Bordeaux
14:45-15:30	Exercise on LCA	Group Work	
15:30-15:40	Quiz on LCA	Live Quiz	All
15:40-15:55	Discussion of results	Discussion	
15:55-16:05	Break		
16:05-16:20	Discussion of the day's contents	Discussion	All
16:20-17:00	Keynote: A global outlook to sustainable resource management and a circular economy	Lecture	Raimund Bleischwitz, University College London
17:30-19:00	Punting on the river	Group activity	
From 19:00	Dinner in the "Cambridge Chophouse"		

## July 12: Solutions

08:30-09:00	Welcome coffee		
09:00-09:05	Short introduction of the day		Alessandra Hool, ESM Foundation
09:05-09:25	Responsible mining	Lecture	Dominique Guyonnet, BRGM
09:25-10:05	Responsible sourcing	Lecture	Dieuwertje Schrijvers, University of Bordeaux
10:05-10:35	Exercise on responsible sourcing	Group Work	
10:35-10:45	Quiz on responsible sourcing	Quiz	
10:45-11:00	Discussion of results	Discussion	
11:00-11:20	Break		
11:20-11:50	Introduction to circular economy	Lecture	David Peck, TU Delft/ Layla van Ellen, TU Delft
11:50-12:20	Circularity indicators	Exercise	James Goddin, Granta Design/ David Peck, TU Delft
12:20-12:30	Quiz on CE and circularity indicators	Live Quiz	All
12:30-12:50	Discussion of results	Discussion	
12:50-13:50	Lunch		
13:50-14:50	Circular Product Design	Lecture	Ruud Balkenende, TU Delft
14:50-15:00	Quiz on Circular Product Design	Live Quiz	
15:00-15:15	Discussion of results	Discussion	All
15:15-15:25	Break		
15:25-16:30	Transforming materials research into business	Case lecture	Patrick Coulter, former CEO Granta Design
16:30-16:45	Survey on School	Survey	Andrea Gassmann, Fraunhofer
16:45-17:00	Closing remarks		Alessandra Hool, ESM Foundation
From 17:00	Apéritif and Farewell in "The Eagle"		