

## **THE PSYCHOLOGY OF OBJECT CONSTRUCTION**

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### **AIMS**

The principal aim of the workshop is to pursue conjectures concerning the psychology involved in the construction of mathematical objects meeting specified conditions. Participants will engage in mathematical tasks which involve the construction of objects, which, although familiar in general, may lead to extending their sense of classes of objects.

A subsidiary aim of the workshop is to demonstrate in practice how it is possible to learn from reflection upon, and abstraction from, your own experience, informed and supplemented by accounts offered by colleagues,

### **TOPIC**

Our starting point is that one characteristic of an expert is the ability to re-construct what they need, suitably modified and adapted to the current situation. This is in contrast to remembered and recited phrases, incantations and techniques. Our concern is with the construction of mathematical objects. We have discovered that many teachers at all levels report that they sometimes get their learners to construct mathematical objects for themselves. We are collecting examples of how learner-generated-examples alter the learners' relationship with mathematical objects and affect the kind of understanding which they display.

### **PLANNED ACTIVITIES**

Activities will be based around mathematical tasks constructed on the basis of studies currently in progress and so are not specifiable in detail at this stage. They will be appropriate for a wide range of participants.

Participants will be invited to work individually and then in groups on a minimum of two different tasks per session, and to engage in small-group and plenary reflection and abstraction from that experience.