

Building a research group from the ground up: *evolution through interaction and iteration*

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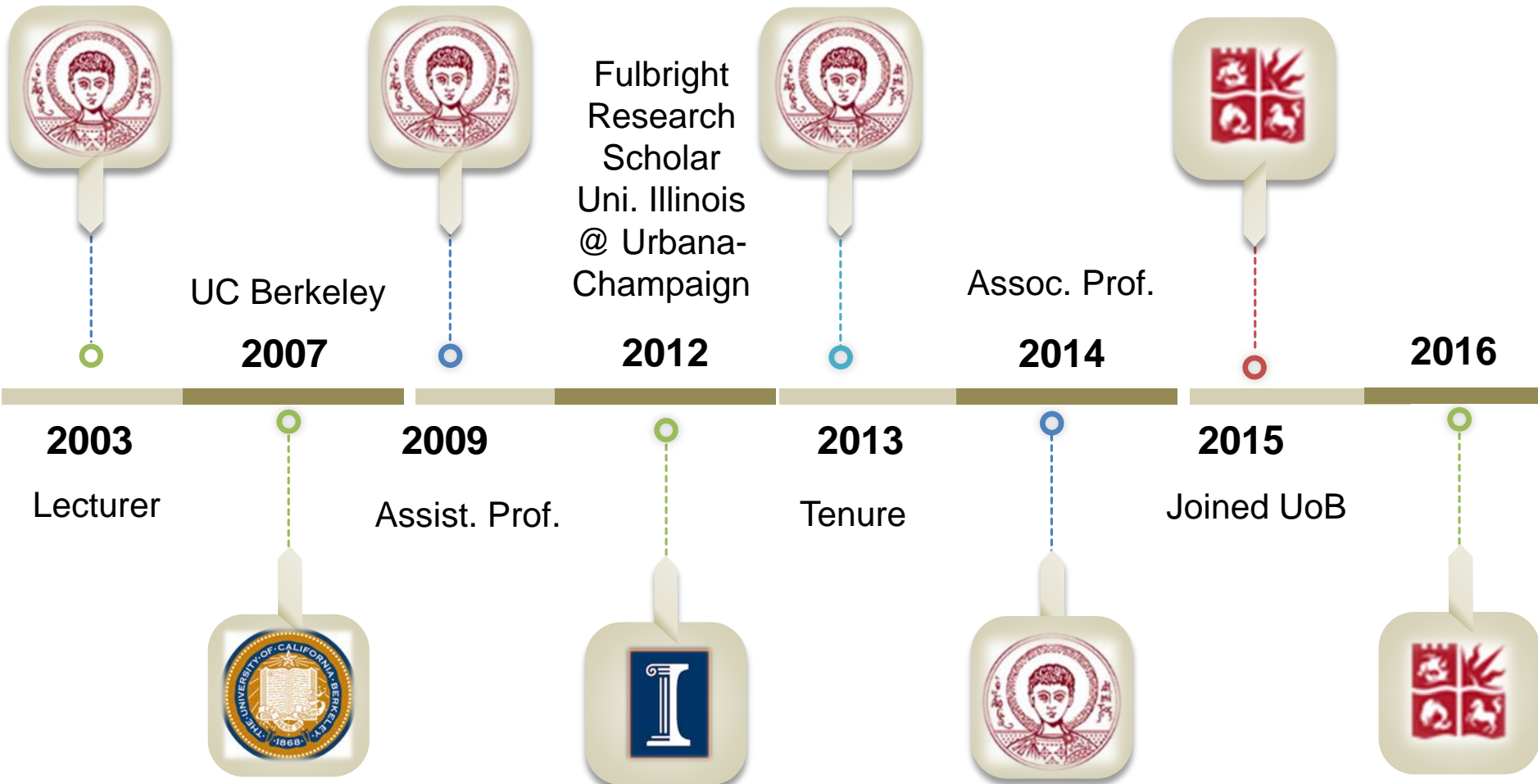
www.asextos.net

**'Going public' Academic
Practice Symposium**

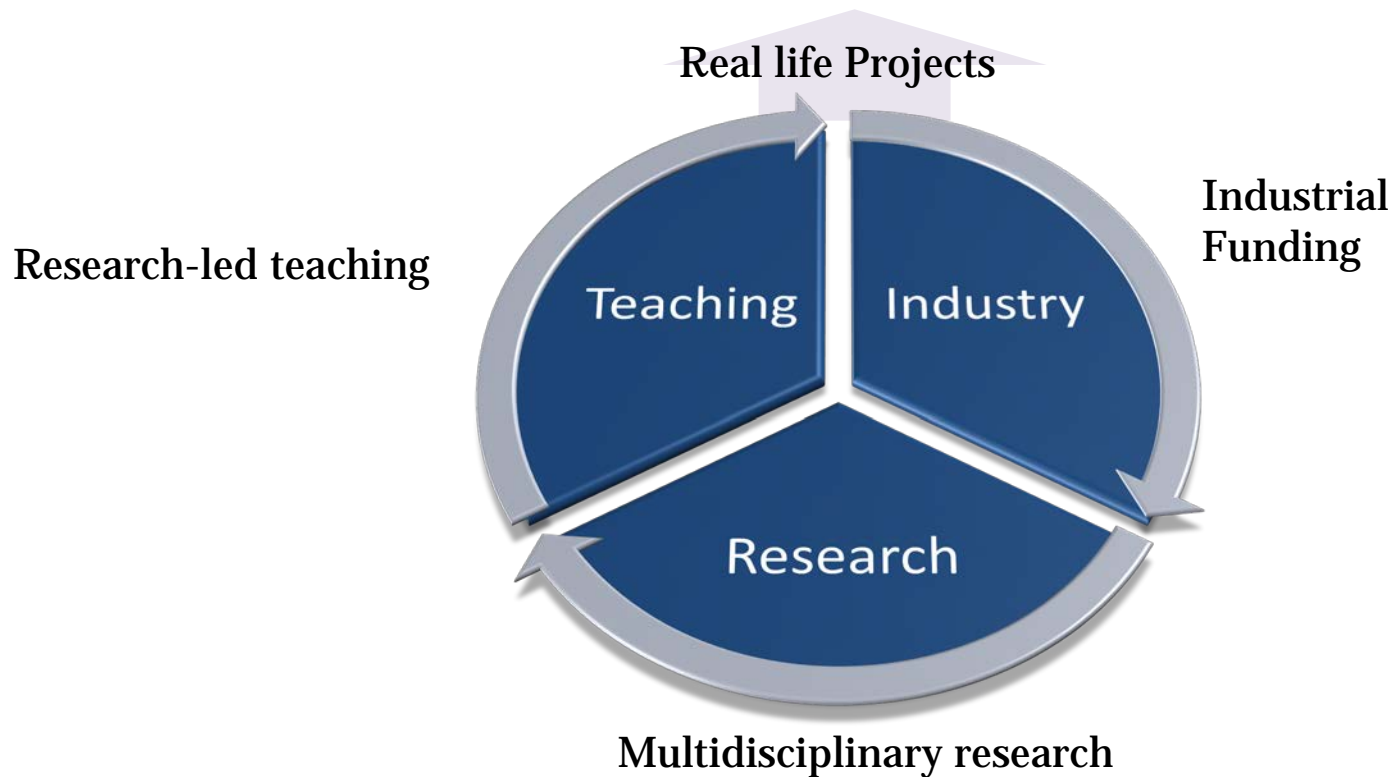
University of Bristol, Wednesday 13 April 2016

Personal timeline

13th April 2016



Community service
at governmental bodies + international
committees and organizations

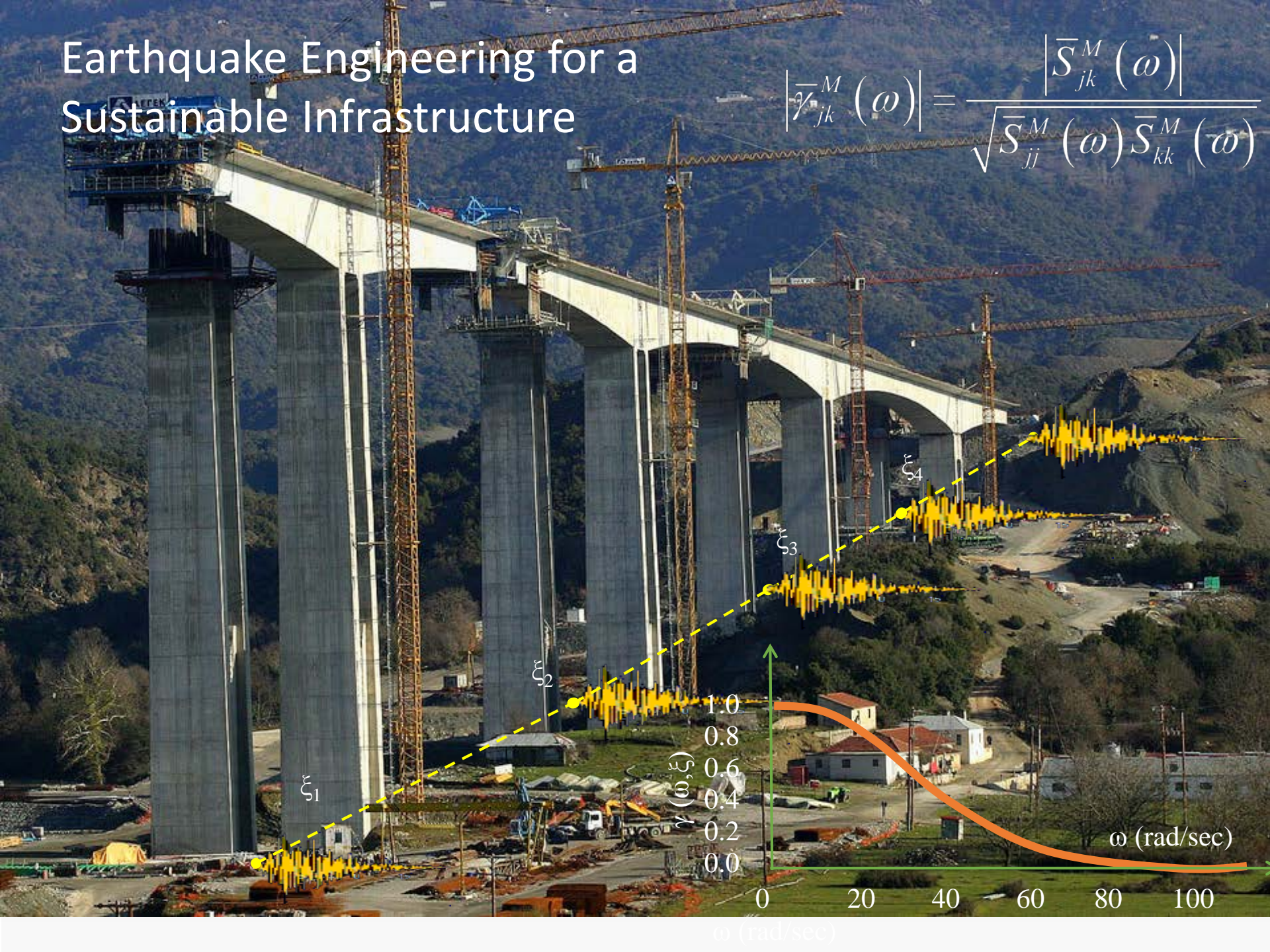


Structures, Geotechnics,
Systems, Computer Science



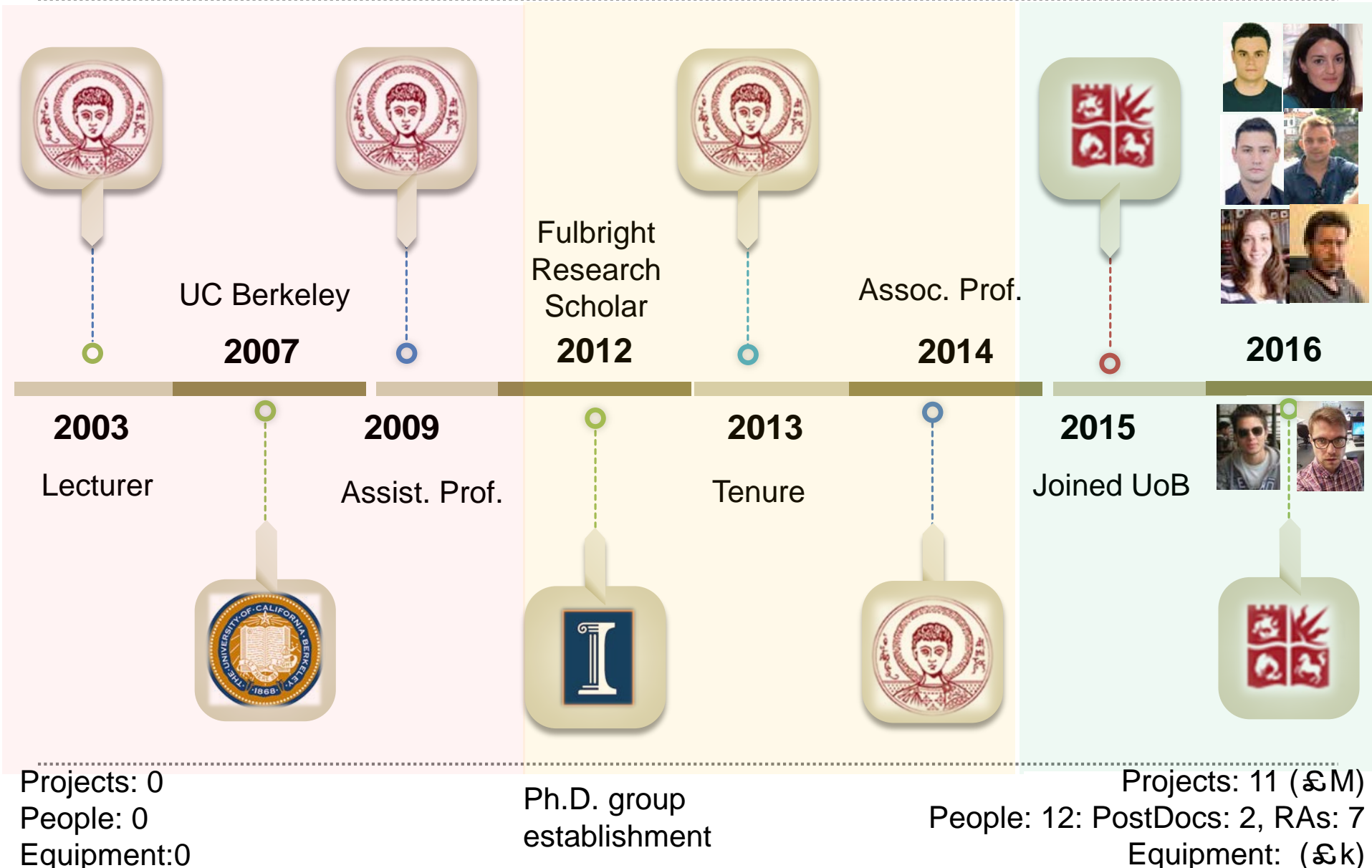
Earthquake Engineering for a Sustainable Infrastructure

$$\left| \bar{\gamma}_{jk}^M(\omega) \right| = \frac{\left| \bar{S}_{jk}^M(\omega) \right|}{\sqrt{\bar{S}_{jj}^M(\omega) \bar{S}_{kk}^M(\omega)}}$$



Group timeline

13th April 2016



Two major problems

13th April 2016

When starting a Research Group the (young) faculty member

- has no real experience in managing people
- thinks that HRM is rather easy

Building the “Failure Lab”

13th April 2016



Mistake #1

13th April 2016

Hypothesis

I'll build my group with people
like me

and if I can't find them
I will train them to think and
act alike

REALITY

People are all different even if
they have the same background,
education or performance

They don't necessarily like
scheduling, teamwork, working
under pressure

and they certainly don't think the
same way

(in fact they should not!)

Mistake #2

13th April 2016

Hypothesis

I'll work solely with top students

We will be highly competitive

All others are mediocre and a waste of time

REALITY

Yes, top students are proven doers and have high mental capacity

They don't necessarily fit well in the team, or interact well with the advisor

The role of researcher is entirely different than that of the UG

There are hidden gems with lower scores but extreme talent in research

Hypothesis

What if I invest on these people and soon after they get their PhD they leave?

What if they disclose all my expertise to our competitors?

REALITY

Knowledge is received for free and is shared for free

Yes, some people are inappreciative or not faithful. Time invested might be lost. It was, in fact, lost. So be it.

But if they wish a better appointment and make their own career let them fly, the RG is not a prison. Be proud of their success

Good people will always appreciate the RG and will be long term collaborators in their own will and way

Hypothesis

“Why do they complain?”

“If I could make it in their age
with fewer resources so
they should!”

REALITY

If they are of proven quality and
determination and complain then
there must be a problem with the
RG business model

Yes, you could make it in the
past but sometimes you couldn't
as well, remember?

Hypothesis

The more students, the better.

The group needs to be strong

Every problem is solved with
more manpower

REALITY

It's the quality, not quantity

It is also the selection of people
with complementary skills that
complete the puzzle

Every problem can be solved
with a smart group

In most cases size is irrelevant

Hypothesis

Invest in the location

Gather resources in one place,
ideally next to the Lab

Protect the resources

REALITY

Ideas and innovation are soft, they
do not have a physical location

Most of the RG resources can be
managed in the cloud

Geographical distribution of
people (ideally in different time
zones) is a plus not a drawback
since they bring expertise of an
external environment, open new
collaboration paths

IT resolves most presence issues

Hypothesis

Commit with long grants well
in advance

This is a source of stability for
the people and the group

REALITY

Yes, but test the student first
don't guess her/his ability and
don't simply trust their metrics

Confidence and stability shall be
build gradually

Milestones, deliverables and
awards go hand in hand

Hypothesis

Every member of the RG has an individual and independent grant with the Group Leader depending on her/his own performance

It is not his/her business what agreements are offered to others

REALITY

RG members naturally talk to each other and compare

They all assume that they perform at their best (even if they don't); hence, they expect to receive the same funding and opportunities

Be clear with the targets and expectations, be transparent and fair

Awards can be performance-based as long as the rules are known in advance

Hypothesis

After so much training they
should be able to perform
on the auto-pilot if I am not
available to meet for one
week

REALITY

Some can but some cannot

Identify who needs support

Share schedule early enough

Provide exact list of expectations
while away, and offer the support
required by a substitute person

Hypothesis

RG members are happy with
how things develop

REALITY

Not obvious

Open to them, ask them. Meet with families outside the office. Appreciate their background, respect their personal life.

Build a positive working environment of excellence, collaboration and trust

We can work hard, but we can also have fun. Don't overdo it.

As long as we follow the plan things
will come naturally