Welcome to the Birmingham Professional Forum

8th March 2016
Welcome
Lee Sanders, Registrar and Secretary

Gravitational Waves: A New Era for Astronomy
Professor Alberto Vecchio and Professor Andreas Freise, School of Physics and Astronomy

Professional Services’ Strategic Framework website
Mark Senior, Assistant Registrar

Our Future Estate
Trevor Payne, Director of Estates

Questions
First Detection of Gravitational Waves

Andreas Freise, Alberto Vecchio
08.03.2016
Einstein’s Theory of Relativity

Einstein: Die Grundlage der allgemeinen Relativitätstheorie
Observing Gravitational Waves

Gravitational waves change the distance between objects.

[http://www.einstein-online.info]
Interferometry in 1887

Michelson interferometer (ca. 1887)

Sensitivity: 0.01 of a fringe

1 fringe
Length Scales

1 m

1 mm

µm

nm

50 pm

fm
Length Scales

Michelson 1887

Gravitational Waves
LIGO Today

LIGO-Hanford

Sensitivity:
0.000 000 000 000 01
of a fringe
or
10^{-20} m
We have detected gravitational waves!

14 September 2015
09:50:45 UTC
Where it came from...
**Astrophysics**

Living as a binary

Building a binary

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Image: Postnov & Yungelson (2014)

Image: J.-C. Cuillandre/G. Anselmi/Hawaiian Starlight
The Universe just got a lot louder, stay tuned...
Since the new Aston Webb Student Hub opened its doors in September 2015 over 50,000 queries have been handled from students and alumni.

In line with our strategic aim to support an excellent education and student experience the Hub brings together a significant number of student information, guidance and support services in one place.

The newly refurbished space boasts a 250-seat lecture theatre, state of the art study space and a suite of one-to-one consultation rooms, to support our students from registration to graduation and beyond. The modern space operates with a new functional service model at its centre, offering a more effective initial interface for students.
Our Future Estate

Estates Strategy 2016-2021

Birmingham Professional Forum

Trevor Payne Director of Estates

8th March 2016
Land & Footprint

- Footprint & Locations
- What/Where/How/Why?
- Too much/Not enough?
- Sell/Acquire/Swap/Re-purpose
Existing Estate

- 280 acres at Edgbaston
- 40 acres at Selly Oak
- 200+ buildings
- 500,000 sq.m.
- 4,200 student beds
- £12m+ gas/electric bill  50,000 tonnes CO2
- 15% listed/protected/Registered parks
- 1 railway station
• Utilisation/Owernship/Sweat the Assets
• Learning Spaces Vs Local Ownership
• TRAC & cost of space process
• Hot/Cold sites
• ‘Pop up’ facilities
• Flexible working – New Core
• Upgrade/Build/Vacate/Lease
• Leases & Third Parties
- Condition survey – statutory compliance
- Risk Prioritised Development
- Irregular Maintenance £7M PA
- Capital scheme – backlog benefit
- Disposal – backlog benefit
- Basics – FLIP/NSS
Staff/Student/Community Experience

- Construction vs Campus Disruption
- Student Logistics
- DDA
- Way finding – Visitor Attraction
- Car Parking – restrictions & modal shift
- Train & Tram links
- Post 5PM Campus Experience
Master Plan-10 Year Estate Strategy

- Development Plots – known/upcoming
- Academic priorities
- College/School strategy & Lifesciences
- Look & feel - Sense of arrival
- Heritage Buildings
- Transport & Planning
- Residences strategy
- Golden Threads/Fixed points
- Innovative procurement
Current capital activity

Annual Capital Expenditure £m

0 20 40 60 80 100 120 140

11/12 12/13 13/14 14/15 15/16

Library £59m
C block student hub £13.4m
Chamberlain Hall £47.6m
Sports Centre £55m
BIM SIMULATION

• Over 150 different systems in a high spec building these days
• More if advanced requirements for teaching/research

The Challenge
• Making them work together
• Commissioning & Management

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<thead>
<tr>
<th>HVAC</th>
<th>Fire</th>
<th>Lighting</th>
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<td>Security</td>
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Uber  
The world’s largest taxi company, owns no vehicles.

Facebook  
The world’s most popular media owner, creates no content.

Alibaba  
The world’s largest accommodation provider, owns no real estate.

Airbnb  
The most valuable retailer, has no inventory.

Something interesting is happening.  
TOM GOODWIN
Questions

Feedback and topic requests can be sent to: internalcomms@contacts.bham.ac.uk

For the latest staff news and events visit: intranet.birmingham.ac.uk

Follow us: @buzzunibham
Celebrating #UoBWWomen for International Women’s Day 2016

The University is celebrating the diversity of experience of our alumnae, staff and students by hosting a Twitter event all day today. The event is co-ordinated by Development and Alumni Relations - join athletes, academics, politicians, writers, students, business leaders and nurses @birminghamalum using #UoBWWomen to be part of the conversation.