

# Costing Research at Bath

## Industry Workshop



## INTERACTIVE WORKSHOPS

Tuesday 4th November 2014, Bailbrook House, Bath, BA1 7DA

The workshops will provide demonstrations/interaction with the research we have undertaken with our industrial partners. The aim is to provide delegates with an overall insight to the methods we have adopted using a hands-on approach.

### Programme:

- |       |  |       |  |
|-------|--|-------|--|
| 09:30 | Registration and Coffee  | 14:00 | Review of workshops  |
| 10:00 | Welcome and Opening Remarks –<br>Linda Newnes, University of Bath  | 14:45 | “Optimizing Optimism: Why Engineers Should be<br>More Like Gamblers ”<br>Dr Ricardo Valerdi – University of Arizona<br>This talk focuses on the biggest source of estimation<br>error: the human. I will present heuristics, commonly<br>observed shortcuts in decision-making, which are<br>frequently observed in cost estimation. I will also<br>demonstrate how biases – specifically optimism bias –<br>can be measured and corrected to improve estimation<br>accuracy. The goal of this talk is to encourage the cost<br>community to be more like gamblers and less like<br>engineers. |
| 10:15 | “Smart Maintenance Decision Support Systems”<br>Dr Dan Bumblauskas - University of Northern Iowa<br>We have heard of big data and predictive analytics,<br>but how can we account for true field repair and<br>replacement cost scenarios in our maintenance<br>planning and modelling? This talk will provide an<br>overview of common field costing in the energy<br>industry and the development of a predictive model(s)<br>to address such cost concerns and considerations.<br>These models aid asset and operations managers<br>as they make field operations and supply chain<br>management decisions. | 15:15 | Closing Remarks –<br>Linda Newnes, University of Bath  |
| 10:45 | Workshop A – Costing for Availability<br>Workshop B – Uncertainty in Contract Bidding  | 15:30 | Coffee and Opportunity for individual confidential<br>discussions<br>Depart  |
| 11:30 | Coffee Break   |       |  |
| 11:45 | Workshops continue   |       |  |
| 13:00 | Lunch  |       |  |

# Price to Win/Value estimation

This workshop will provide an introduction to our 'Uncertainty in Contract Bidding/Price to Win' tool. Using an example based on industrial case studies we will demonstrate:

- A step-by-step approach to elicit data on customer budgets and competitors.
- The use of subjective probabilities and expert knowledge.
- Show how this tangible/monetary information can be used to ascertain the probability of winning the contract/providing value for money and the probability of making a profit.

Finally, we will introduce the work we have undertaken with Georgia Institute of Technology to ascertain the 'value' of your offering to the customer.

## Academics

Dr Linda Newnes, University of Bath  
Dr Goh, Loughborough University  
Dr Paredis, Georgia Institute of Technology

## Industrial Partners

Rolls Royce Submarines  
BAE Systems – Australia, Military Air & Information and Maritime Services

# Costing for Availability

Many High Value Manufacturing industries have moved from selling products to providing their products/assets with support arrangements. An example would be a contract to guarantee an availability/capability. However, current cost estimating approaches tend to focus on the reliability of the product/asset. Our findings show the benefit of estimating the cost of the delivery system – a network of interconnected and independent activities undertaken by various stakeholders. This workshop will demonstrate:

- What to consider when analysing field reliability data.
- How to capture the complex interdependence of customers and providers delivering availability contracts.
- How to use this knowledge/information to estimate the cost of availability.

## Academics

Dr Linda Newnes, University of Bath  
Dr Settanni, University of Bath  
Mr Thenent, University of Bath  
Dr Goh, Loughborough University  
Dr Parry, University of the West of England

## Industrial Partners

BAE Systems Military Air & Information  
GE Aviation, Avionic Systems,  
CAAS, DE&S MoD.

**COST £70** [Click here to book](#)

We have a small number of spaces available for delegates from academia.  
Please contact Dr Newnes to book your space.

For further information please email:

Dr Linda Newnes  
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