

## Professor Peter Butkovic's Inaugural Lecture

<b>Locations</b>	Lecture Theatre A, Watson Building (R15), University of Birmingham (followed by a reception in the Bridge Room)
<b>Date(s)</b>	Wednesday 25th September 2013 (17:15)
<b>Contact</b>	Liam Singleton Email: <a href="mailto:l.singleton@bham.ac.uk">l.singleton@bham.ac.uk</a> ( <a href="mailto:l.singleton@bham.ac.uk">mailto:l.singleton@bham.ac.uk</a> )
<b>Download</b>	<a href="#">Add to Calendar (/events/lectures/Professor-Peter-Butkovics-Inaugural-Lecture.aspx?ical=true)</a>
<b>Registration URL</b>	<a href="http://www.birmingham.ac.uk/university/colleges/eps/inaugural-lecture/peter-butkovic-25-09-13.aspx">http://www.birmingham.ac.uk/university/colleges/eps/inaugural-lecture/peter-butkovic-25-09-13.aspx</a> ( <a href="http://www.birmingham.ac.uk/university/colleges/eps/inaugural-lecture/peter-butkovic-25-09-13.aspx">http://www.birmingham.ac.uk/university/colleges/eps/inaugural-lecture/peter-butkovic-25-09-13.aspx</a> )

### ... And Beautiful is Useful ...

The Perron-Frobenius theory of nonnegative matrices, created a century ago, is one of the most elegant theories in mathematics. In recent years it has found remarkable real-life applications, for instance it was used in the design of Google in a way that enabled it to become a world leading search engine.

Tropical mathematics is a new direction in mathematics where the operation of addition is replaced by that of maximum. Its foundations were laid in the UK 50 years ago. Tropical mathematics was originally restricted to linear algebra but since about 1995 it has received worldwide attention in a range of mathematical areas from algebra and geometry to topology, combinatorics and optimisation. Applications of tropical mathematics can be found in areas as diverse as programs verification, phylogenetics, cellular protein production and railway scheduling.

We will demonstrate that the tropical Perron-Frobenius theory finds its applications in studying complex systems consisting of processors working interactively and in stages. We show how this theory can be used to characterise stability of such systems.

This event is open to all, but you must [register here](http://www.birmingham.ac.uk/university/colleges/eps/inaugural-lecture/peter-butkovic-25-09-13.aspx) (<http://www.birmingham.ac.uk/university/colleges/eps/inaugural-lecture/peter-butkovic-25-09-13.aspx>).



Professor Peter Butkovic