No guest lecture due to covid - However we do have guest material
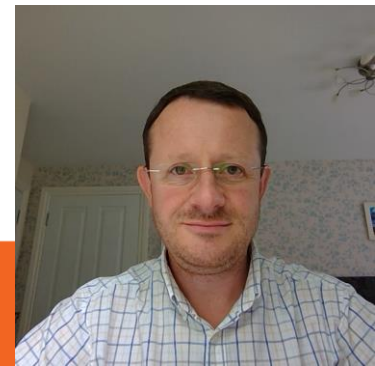
Wes Armour

Oxford e-Research Centre,
Department of Engineering Science

Oxford e-Research Centre

NVIDIA Slides

Abstract - *An Accelerated Computing System is Different*

The title of the presentation is a quotation from Steve Oberlin, the CTO of NVIDIA's accelerated computing business unit. An accelerated computing system should not be viewed as another type of computer to target for porting legacy applications, but rather a new computational platform enabling new approaches to simulation and modelling. This change was proven by the 2018 Gordon Bell Prize awards in which new algorithms and coupling AI methods with traditional simulation have advanced computational science. NVIDIA is innovating across all layers of the solution stack: the hardware and processor architecture; the programming model, libraries, tools, compilers, and new approaches to simulation.

Bio

Timothy Lanfear manages the European solution architecture and engineering team in NVIDIA's Enterprise Solutions Group. He has twenty-five years' experience in HPC, starting as a computational scientist in British Aerospace's corporate research centre, and then moving to technical pre-sales roles with Hitachi, ClearSpeed, and most recently NVIDIA. He has a degree in Electrical Engineering and a PhD for research in the field of graph theory, both from Imperial College London. He is a Chartered Engineer and Member of the Institution of Engineering and Technology.

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NVIDIA Slides

Abstract – Enduring differentiation

https://www.youtube.com/watch?v=y3aD6Ee7BxM

Bio

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Abstract

Majority of interesting problems tackled by industry are fairly complex. Where it is relatively easy to build an early POC of a system it takes a huge amount of effort to build a solution meeting all of your functional as well as non-functional requirements. For example its fairly straightforward to build a POC Self Driving Vehicle that will drive across a small number of streets with human supervision. On the other hand building a Self-Driving Car which a robust and safe is an engineering feet requiring petabytes of data for training and validation. In this talk we will tackle some of the key challenges of building complex Deep Learning based systems with a primary focus on scalability of the training process.

Bio

Dr Adam Grzywaczewski is a deep learning solution architect at NVIDIA, where his primary responsibility is to support a wide range of customers in delivery of their deep learning solutions. Adam is an applied research scientist specialising in machine learning with a background in deep learning and system architecture. Previously, he was responsible for building up the UK government's machine-learning capabilities while at Capgemini and worked in the Jaguar Land Rover Research Centre, where he was responsible for a variety of internal and external projects and contributed to the self-learning car portfolio.

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NVIDIA YouTube channel

https://www.youtube.com/watch?v=e2_hsjpTi4w&list=PLZHnYvH1qtObE_PjzaAFqS_CpmumGx5cW&index=2&t=0s   I AM AI

https://www.youtube.com/watch?v=tpeGZ7nm0J0   GTC2020 talk on HPC and Scientific Computing

https://www.youtube.com/watch?v=3mkRyBkS5zE&list=PLZHnYvH1qtOZ2BSwG4CHmKSVHxC2lyIPL&index=12&t=0s   NVIDIA Issac

https://www.youtube.com/watch?v=Ck7eXSkD72M&list=PLZHnYvH1qtOZ2BSwG4CHmKSVHxC2lyIPL&index=14&t=0s   NVIDIA Drive SIM

https://www.youtube.com/channel/UCHuiy8bXnmK5nisYHUd1J5g   NVIDIA YouTube Channel

https://www.youtube.com/watch?v=cL05xtTocmY   Installing CUDA on windows

https://www.youtube.com/watch?v=2EbHSCvGFM0   Writing a CUDA code

https://www.youtube.com/watch?v=vMZ7tK-RYYc   Installing CUDA python

https://www.youtube.com/playlist?list=PLZHnYvH1qtObE_PjzaAFqS_CpmumGx5cW I AM AI Docseries

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