

# John Lindsay Orr

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## Core Skills

I am a full-stack engineer with decades' experience in tech and university sectors building internet applications used by millions. I work with stakeholders across the board in situations of high complexity and ambiguity to deliver beautiful, robust solutions to business needs.

## Education

### PhD Mathematics

King's College,  
University of London

### Certificate of Advanced Study in Mathematics

University of Cambridge  
With Distinction

### BSc Mathematics

Imperial College,  
University of London  
First Class Honours

## Status

I am authorized to live and work in the US and the UK.

## Experience

### Google: Research

Senior Software Engineer

2013 - present

Software engineer and front-end lead on Google's Course Builder, an open-source platform for delivering education at massive scale. Course Builder is used by Google and external adopters such as Harvard, National Geographic, Red Cross (IFRC), and Sesame Street to power courses serving millions of learners. I lead front-end development on Course Builder and contribute code across the stack with particular emphasis on extensibility, interactive content creation, and innovative educational features.

**technologies:** Python, AppEngine, jQuery, Angular, Polymer

**see:** <http://johnorr.us/#cb>

### Google: GeoCommerce

Senior Software Engineer

2011 - 2012

Software engineer and API server lead on Google's unified in-page web buy-flow. I led design and development of the REST API service providing a common buy-flow experience across key Google web properties such as Google Play, YouTube, Google Offers, and Google Drive. Branded as "Google Wallet for Digital Goods" the product was used by external merchants such as Rovio and Kabam. Led subteams on R&D of innovative payments products.

**technologies:** Java, Servlets, GWT, Google infrastructure

**see:** <http://johnorr.us/#wallet>

### Brownstone Research: Ed-Tech Start-up

Chief Architect

2001 - 2005

Principal in a startup subsequently acquired by Wimba and Blackboard. Led design and development of on-line homework management system from first conception to a mature product in the market. This product was integrated in the websites of 4 of the 6 leading college textbook publishers, and delivered content from hundreds of college textbooks, primarily in SMET disciplines, and also Business/Finance, and Social Sciences. At its peak this software was serving about 400,000 students in 2,000 classes world-wide, and was deeply integrated in Blackboard, CourseCompass, and publisher and university websites. When Brownstone partnered with Maplesoft, I led development of the first versions of Maplesoft's educational product MapleTA.

**technologies:** Java, Javascript, LaTeX

**see:** <http://johnorr.us/#edu>

**University of Nebraska - Lincoln:** Department of Mathematics

Professor and Vice Chair

1991 - 2011

*Software:* Online student assessment products; The Wiley WebTests in Calculus, The Wiley WebTests in Precalculus, and eGrade 1.0. EGrade was one of the the first online homework management systems, and it pioneered the concept of instant online grading of homework questions linked to a textbook.

*Publications:* Author of 18 research papers in modern analysis and combinatorics published in top refereed scientific journals

**see:** <http://johnorr.us/#pubs>

*Teaching and presentations:* Taught over 50 university courses ranging from calculus to advanced graduate topics. Received teaching awards from my department, my college, and the UNL Parents' Association. Presented almost 100 colloquia, invited seminars, and conference talks.

*Grants:* Principal investigator (PI) on grants and contracts totalling over \$1m, including multiple NSF grants supporting my research.

**see:** <http://johnorr.us/#cv>

**University of Waterloo:** Department of Mathematics

Postdoctoral Research Assistant

1990 - 1991

Research postdoc funded by National Science and Engineering Research Council (Canada)

**University of Lancaster:** Department of Mathematics

Postdoctoral Research Assistant

1989 - 1990

Research postdoc funded by Science and Engineering Research Council (UK)