

# Liam WILBRAHAM

## PERSONAL DATA

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PLACE OF BIRTH: United Kingdom  
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## WORK EXPERIENCE

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- JAN-MAY 2014** | **Research Intern at ECOLE NATIONALE SUPERIEURE DE CHIMIE DE PARIS, Paris, France**  
Rue Pierre et Marie Curie, Paris, France, 70005  
The purpose of this research internship was to take charge of a project aimed at developing a strategy for the ab-initio design of molecules for various real-world applications. This project required tremendous organisational skills due to the ambitious time frame and complexity of the work. The nature of the project required me to work independently while seeking specialist advice when needed. The project was a success and the final work will be published, as a report, in a leading scientific journal, directly contributing to the research efforts of the engineering school as a whole. This project allowed me to develop excellent analytical and problem solving skills, along with my knowledge base in theoretical chemistry techniques such as density functional theory. The experience of working abroad was also invaluable, allowing me to develop my French language skills while working within a large research group of 20 researchers from all over the world.
- SEP-DEC 2013** | **Teaching Assistant at the UNIVERSITY OF STRATHCLYDE, Glasgow**  
16 Richmond St, Glasgow, Glasgow City G1 1XQ  
Assist in the tuition of over 70 university students on a weekly basis in an advanced (4th Year) class designed to enhance engineering problem solving skills. This role developed my understanding of what students expect from university education both from a material and teaching perspective.
- JUN-SEP 2013** | **Research Intern at the UNIVERSITY OF STRATHCLYDE, Glasgow**  
16 Richmond St, Glasgow, Glasgow City G1 1XQ16  
Challenged to analyse the adsorption of gases significant in carbon capture in Metal-Organic Framework materials using simulation and modelling techniques. Based on my own academic merit and the strength of the research proposal, I was awarded a BP research bursary to the value of £1,400. Following research, decided to use a Monte-Carlo simulation approach, given its previous success in simulating adsorption processes. The data analysis from the simulation was carried out using tools I designed using the Python programming language, used for its simple, versatile and succinct nature. These decisions proved successful - the model's ability to predict gas uptake was improved upon by 25% and the results were fed into the research programme of my supervisor. These results are significant as better models are required to screen the huge range of these materials available to optimise their application in carbon capture.
- SEP 2012-SEP 2013** | **Supervisor/TeamLeader at PRIMARK STORES LTD, Glasgow**  
56 Argyle St, Glasgow, Lanarkshire G2 8AG  
Role demanded exceptional leadership and management skills to directly supervise and make effective use of over 40 staff at one time. Responsibilities included training staff to provide excellent customer service and uphold core company values, implementing systems to enhance daily operation of the shop floor - introduced a staff customer service tracking scheme to motivate staff to achieve company service goals; implemented a system to minimise stock loss in one area of the store, saving up to £1,000 per month from damaged stock. Relied upon to assess staff strengths to make best use of their abilities. Expected to provide exemplary customer service.
- JUN-SEP 2012** | **Camp Counsellor at CAMP ANNE, New York, USA**  
228 Four Corners Road, Ancramdale, NY 12503  
Responsible for organising a dynamic and accessible program of games, arts and sports for kids and teens (age 6 to 21) with developmental disabilities. Part of a very strong and culturally diverse team of 20 counsellors. Due to the enormous responsibility and challenging nature of the work, I was heavily relied upon to offer support to colleagues throughout the summer and approach every task with a positive and energetic attitude.

## EDUCATION

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- JUN 2014 (Expected) Master of Engineering (MEng) in CHEMICAL ENGINEERING,  
**The University of Strathclyde**, Glasgow  
*Expected Masters with Distinction* | [Detailed List of Exams](#)
- JULY 2013 1st Class Bachelor of Engineering (BEng) with Honours in CHEMICAL ENGINEERING  
**The University of Strathclyde**, Glasgow  
GRADE: 1st Class | [Detailed List of Exams](#)
- APRIL 2009 St. Matthews Academy, Saltcoats, North Ayrshire, United Kingdom

## SCHOLARSHIPS AND CERTIFICATES

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- JUN 2013 BP Chemicals Research Bursary Award, **The University of Strathclyde**  
2010-2014 Present on Dean's List of Students Achieving a Meritorious Standard

## LANGUAGES

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- ENGLISH: Fluent reading, writing and speaking  
FRENCH: Intermediate reading and speaking, Basic writing

## COMPUTER SKILLS

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- PROGRAMMING LANGUAGES: Basic Knowledge of BASH, C+  
Intermediate knowledge of PYTHON, VBA.
- COMPUTER PACKAGES: Intermediate knowledge of LINUX, Matlab, Aspen, GROMACS,  
powerpoint, Gaussian09 (theoretical chemistry package).  
Expert Knowledge of Microsoft Word, Excel, Mathcad,  
L<sup>A</sup>T<sub>E</sub>X (professional text editor), MULTipurpose Simulation Code (MUSIC).

## INTERESTS AND ACTIVITIES

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5th Year Chemical Engineering Class Representative  
Languages - Learning French  
Shotokan Karate - 1st Dan Black Belt, former national champion in two events  
Tutoring - Private tutor to 4th-6th year school pupils. Create own teaching materials which I believe allow more effective learning of subject material.  
Travelling - travelled across America and Europe  
Academic Interests - Programming, Computational Chemistry  
Statistical Mechanics, Quantum Mechanics, Physics

## ADDITIONAL INFORMATION

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Full UK Drivers License

REFERENCES AVAILABLE UPON REQUEST

# MEng in CHEMICAL ENGINEERING

## Grades

EXAM	GRADE(%)	CREDIT HRS
Chemical Engineering Project	88	60
Molecular Simulation	78	10
Programming and Optimisation	75	10
Nanotechnology	87	10
Modern Methods of Process Measurement	97	10
Membrane Technologies	72	10
Model Based Process Control	92	10
Chemical Engineering Design Project	73	60
Advanced Separations and Problem Solving	87	20
Process Control and Environmental Technology	64	20
Particle Technology and Multiphase Systems	82	20
Mass Transfer and Separation Processes	78	20
Materials Processing and Application	73	20
Reactors and Biochemical Engineering	82	20
Ethics, Sustainability and Economics	55	20
Chemical Engineering Design and Advanced IT	74	20
Chemical Engineering Practice 2	76	20
Thermodynamic and Chemical Principles	71	20
Fluid Flow and Heat Transfer	81	20
Safety and Process Management	71	20
Process Analysis and Statistics	77	20
Chemical Engineering Practice 1	76	20
Mathematics 3B	97	20
Mathematics 2B	84	20
Mathematics 1B	Exempt	20
Fundamentals, Techniques and Tools	73	20
Chemistry: Principles and Practice	Exempt	20
Basic Principles in Chemical Engineering	80	20
The Universe and Everything (Elective)	55	10
Introduction to Astronomy (Elective)	77	10
<b>Total</b>		<b>480</b>