DR SALVADOR ACHA
149 Hermitage Waterside, Thomas More Street, London E1W 1YD
Telephone: +44 (0) 783 881 8934
E-mail: salvador.acha@ic.ac.uk

OBJECTIVE:

My goal is to become a renowned professional in addressing socio-technical problems that support unlocking investment in low carbon systems across different economic sectors. For that I want to employ my expertise to conduct leading research that positively influences organisations and society into taking meaningful measures that enhance the use of energy resources, promote energy efficiency and tackle climate change.

PERSONAL PROFILE:

Committed to activities in the field of integrated energy systems by addressing multiple infrastructures as well as low carbon technologies that enhance resource efficiency and the smarter use of energy. During my early career I have been able to drive positive change in individuals, private organisations, publish a book, write high-quality journals and many conference papers in the field of smart low carbon energy systems. My professional passions include optimal investment of low carbon technologies, modelling energy markets, optimal management of technologies, robust performance indicators of energy systems, decarbonisation roadmaps of large organisations, energy and environmental governance in organisations.

You can find more info about my profile at https://www.imperial.ac.uk/people/salvador.acha

EDUCATION:

- *2006 – 2010* *Imperial College London, Department of Electrical Engineering, UK*
  PhD in Integrated Modelling and Optimisation of Energy Systems (funded by CONACyT)
  Thesis title: "Impacts of Embedded Technologies on Optimal Operation of Energy Service Networks"
  Thesis published as a book titled "Modelling Distributed Energy Resources in Energy Service Networks" (IET Press, 2013)
- *1999 – 2003* *Instituto Tecnológico y de Estudios Superiores de Monterrey, Mexico*
  BSc in Electronics and Communications Engineering (funded by ITESM)

EMPLOYMENT:

- *2011 – Present* *Imperial College London, Department of Chemical Engineering, UK*
  Research Fellow in Energy Systems and the Built Environment:
  The Imperial-Sainsbury's Partnership (funded by Sainsbury's Supermarkets Ltd.)

POSITION PROFILE

Team Leader and researcher of the Imperial–Sainsbury's partnership focused on reducing the carbon footprint from retail operations by implementing novel strategies that respond to the challenges of rising energy prices and sustainability targets. This stimulating multi-disciplinary project has allowed me to gather a wealth of experience, strengthen my academic skills, and helped me make a wide range of contacts with a wide range of stakeholders. More information on the partnership at: http://www.imperial.ac.uk/sainsburys-decarbonisation-partnership

Responsibilities & Achievements

- Managed the relationship with the steering committee for over 8 years securing more than £2M of funding to conduct cutting-edge research in the field of decarbonising commercial retail operations.
- Led the Imperial research team in its collaboration with Sainsbury's engineering, energy,

logistics, ethical sourcing and sustainability teams by addressing pressing challenges regarding their decarbonisation strategy (e.g. food production, logistics, supermarkets, etc.).

- Supported in developing the research programme and in establishing multiple lines of research, reporting periodically to the project steering committee on progress and results.
- Managed a team of energy researchers with an annual budget of £250,000 always delivering tasks of the partnership programme on budget and on time as agreed with steering committee.
- Devised energy trials that have delivered savings of over £12 million and 70,000 tCO_2, thus enhancing the bottom-line of the project sponsor and securing the longevity of the partnership.
- Supervised over 40 post-graduate and under-graduate projects on energy efficiency, building control strategies, low carbon fuels and technologies, energy markets, environmental policy, district energy systems, corporate governance in carbon footprint management, etc.
- Provided climate change seminars to senior and junior managers in Sainsbury's retail division with the goal to raise awareness in the corporate culture and frequent lecturer in post-graduate engineering and business school courses at Imperial College.
- Established strong links with many organisations addressing research in the built environment and low carbon energy systems such as: National Grid, OFGEM, UKPN, TfL, UK Green Building Council, Ener-G, ENGIE, MITIE, ARUP, Octopus Energy, Open Energi, Doosan, Trend, Danfoss, Schneider Electric, CIBSE, CBRE, The Carbon Trust, Mitsubishi, Aggreko, SMS, Amaresco, Shell, Laing O'Rourke, etc.
- Ad-hoc consultant in energy & sustainability projects addressing the topics highlighted above.

Communications and External Visibility

- Participant of the Imperial College Techcelerate Programme for young entrepreneurs.
- Presented research findings in over 20 conferences and seminars in the UK and abroad.
- Involved in panel discussion sessions concerning issues related to the built environment.
- Sustainable Districts expert advisor on low carbon community projects.
- Member of the ASHRAE London & SE Chapter raising awareness of engineering challenges in the built environment.

PROFESSIONAL MEMBERSHIPS:

- Charter Engineer (**CEng**) and Member of the Institute of Engineering and Technology (**IET**).
- Member of the **IEEE**, **IET**, **IOR**, **CIBSE**, and **ASHRAE**.

PUBLICATIONS (over 577 citations as of January 2019 – Google Scholar):

Selection of Publications

1. Mariaud, A., Acha, S., Ekins-Daukes, N., Shah, N. and Markides, C. (2017), **Integrated Optimisation of Photovoltaic and Battery Storage Systems for UK Commercial Buildings**. Applied Energy. Volume 199, 1 August 2017, Pages 466-478.
2. Cedillos, D., Acha, S., Markides, C., and Shah, N. (2016), **A Technology Selection and Operation Optimization Model for Decentralized Energy Systems**. Applied Energy. Volume 180, 15 October 2016, Pages 491-503.
3. Acha, S., Du, Y., and Shah, N. (2016), **Enhancing Energy Efficiency in Supermarket Refrigeration Systems through a Robust Energy Performance Indicator**. International Journal of Refrigeration, Volume 64, April 2016, Pages 40-50.
4. Mavromatidis, G., Acha, S., Shah, N. (2013) **Diagnostic Tools of Energy Performance for Supermarkets using Artificial Neural Network Algorithms**, Energy and Buildings, Volume 62, July 2013, Pages 304-314.