

# ***Curriculum Vitae***

Title	Dr	Name	Bandar Abdullah Bin-Mohsin		
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Institute/ University	King Saud University	College/ Directorate	College of science	Department	Mathematics
Nationality	Saudi	Date of Birth	12/2/1982	Country of Birth	Saudi Arabia
Languages	Arabic, English				
Highest Degree	Doctor of Philosophy (D. Phil.)	Date of Graduation	2013		
University	University of Leeds	Country	UK		
Academic Title	Dr	Others (Specify)	1.		
			2.		
Major field	Mathematics	Specialization field	Numerical Analysis, Computational Mathematics		

## ***Address***

- P.O. Box 2455, Riyadh 11451, Department of Mathematics, College of Sciences, King Saud University, Kingdom of Saudi Arabia.

## ***Current Research Interests***

Boundary Element Method (BEM), Method of Fundamental Solutions (MFS), Inverse Problems, Partial Differential Equations (PDEs), Computational Fluid Dynamic (CFD), Control Problems, Computational Methods, Numerical Analysis.

## ***Educational Qualifications***

- Bachelor's degree from **Mathematics** department, College of Teaching at King Saud University 2004.
- Master degree from **Applied Mathematics** department, School of Mathematics at the University of Manchester, 2009. Title of thesis: ***Truncated ILU Smoothers for Multigrid Preconditioning of the Helmholtz Equation.***
- PhD degree from **Applied Mathematics** department, School of Mathematics at the University of Leeds, 2013. Title of thesis: ***The Method of Fundamental Solutions for Helmholtz-type Problems.***

## ***Academic Awards***

- Distinction Award for the 2<sup>nd</sup> Year of PhD, awarded by the Saudi Arabian Cultural Bureau, UK, 2010-2011.
- Distinction Award for the 3<sup>rd</sup> Year of PhD, awarded by the Saudi Arabian Cultural Bureau, UK, 2011-2012.
- Distinction Award for the final Year of PhD, awarded by the Saudi Arabian Cultural Bureau, UK, 2012-2013.

## ***Skills***

- Languages: Arabic and English (abilities in speaking, reading and writing).
- Programming languages: Matlab and Fortran.
- Word Processing: LaTeX, Word, Excel, PowerPoint, Access.
- Operating Systems: Windows and LINUX .

## ***Training***

- Finding information for your PhD (2009).
- Managing information for your PhD (2009).
- Giving effective seminars and conference presentations (2009).
- PGs who teach in MaPS faculty (2009).
- Comsol (Finite Element Method) (2009).
- CVs & applications (2009).
- Building an academic career (2009).
- Control volume software (2009).
- Writing for research students in sciences (2010).
- Fortran course (2009).
- Matlab course (2010).
- New Staff Members at KSU, one week (2016).

## ***Attendance of Workshops and Conferences***

- Fourth/ Fifth Knowledge Transfer Workshop/Sandpit on Inverse Problems Industry, UK (2010/2011).
- British Inverse Problems Workshop, UK (2010/2011).
- 29-31<sup>st</sup> Mathematics Teachers and /Advisers Conference (2010-2012).
- Recent Trends in Applied Inverse Problems, University of Birmingham, UK (2010).
- Eighth UK Conference on Boundary Integral Methods, University of Leeds, UK (2011).
- The Sixth International Conference. "Inverse Problems: Modeling & Simulation", Antalya, Turkey (2012).
- LMS meeting on "Sparse Regularisation for Inverse Problems", Workshop, Isaac Newton

Institute, Cambridge, UK (2014).

- The Seventh International Conference. “Inverse Problems: Modeling & Simulation”, Fethiye, Turkey (2014).
- The 5th-international Conference on “porous media and its applications in science engineering and industry”, Kona, Hawaii, USA (2015)
- The International Conference on ‘Trends and Perspectives in Linear Statistical Inference’ (LinStat2014), Linköping, Sweden (2014).
- The 8th Annual International Conference on Combinatorial Optimization and Applications”, Maui, Hawaii, USA (2014).
- Workshop on Numerical Methods for Optimal Control and Inverse Problems, Technische Universität München, Munchen, German (2015).
- The Conference "Advanced Numerical Methods in the Mathematical Sciences", Texas A&M University, College Station, Texas (2015).
- The Tenth UK Conference on Boundary Integral Methods, University of Brighton, UK (2015).
- International Conference on Boundary Element and Meshless Techniques, Middle East Technical University, Ankara-Turkey (2016).
- 29<sup>th</sup> International Summer School 2016 of The Swiss Association of Actuaries on Quantitative Risk Management: Concepts, Techniques and Tools, University of Lausanne, Switzerland (2016).

### ***Talks***

- The Method of fundamental solutions for Helmholtz-type equations, University of Leeds, UK (2011).
- The MFS for Helmholtz-type equations in layered materials, Eighth UK Conference on Boundary Integral Methods, University of Leeds, UK (2011).
- Identification of a corroded boundary and its Robin coefficient, The Sixth International Conference. “Inverse Problems: Modeling & Simulation”, Antalya, Turkey (2012).
- The Method of Fundamental Solutions for Helmholtz-type Problems, King Saud University, KSA (2013).
- Numerical reconstruction of the support of a source in an elliptic equation, The Seventh International Conference. “Inverse Problems: Modeling & Simulation”, Fethiye, Turkey (2014).
- Reconstruction of a source domain, The Tenth UK Conference on Boundary Integral Methods, University of Brighton, UK (2015).
- Meshless reconstruction of the support of a source, International Conference on Boundary Element and Meshless Techniques, Middle East Technical University, Ankara-Turkey (2016).

### ***Selected Publications:***

1. **Bin-Mohsin, B.** and Lesnic, D. (2011) The MFS for Helmholtz-type equations in layered materials, *Proceedings of the 8th UK Conference on Boundary Integral Methods*, (ed. D.Lesnic), Leeds University Press, pp.57-64.
2. **Bin-Mohsin, B.** and Lesnic, D. (2011) The method of fundamental solutions for Helmholtz-type equations in composite materials, *Computers and Mathematics with Applications*, Vol.62, No.12, pp.4377-4390.
3. Lesnic, D. and **Bin-Mohsin, B.** (2012) Inverse shape and heat transfer coefficient

- identification, Journal of Computational and Applied Mathematics, Vol.236, No.7, pp.1876-1891.
4. **Bin-Mohsin, B.** and Lesnic, D. (2012) Determination of inner boundaries in modified Helmholtz inverse geometric problems using the method of fundamental solutions, Mathematics and Computers in Simulation, Vol.82, pp.1445-1458.
  5. **Bin-Mohsin, B.** and Lesnic, D. (2012) Identification of a corroded boundary and its Robin coefficient, East Asian Journal on Applied Mathematics, Vol.2, No.2, pp.126-149.
  6. **Bin-Mohsin, B.** and Lesnic, D. (2013) A meshless numerical identification of a convective corroded boundary, Proceedings of the 9th UK Conference on Boundary Integral Methods, (ed. O.Menshykov), UniPrint, University of Aberdeen, pp.9-16.
  7. **Bin-Mohsin, B.** and Lesnic, D. (2014) Numerical reconstruction of an inhomogeneity in an elliptic equation, Inverse Problems in Science and Engineering, Vol.22, No.1, pp.184-198.
  8. Karageorghis, A., **Bin-Mohsin, B.**, Lesnic, D. and Marin, L. (2015) Simultaneous numerical determination of a corroded boundary and its admittance, Inverse Problems in Science and Engineering, Vol.23, No.7, pp.1120-1137.
  9. **Bin-Mohsin, B.** and Lesnic, D. (2015) Reconstruction of a source domain for the Poisson equation, Proceedings of the 10th UK Conference on Boundary Integral Methods, (ed. P.J. Harris), University of Brighton, Chapter 19, pp.169-178.
  10. **Bin-Mohsin, B.** and Lesnic, D. (2016) Reconstruction of a source domain from boundary measurements, Applied Mathematical Modelling, (Submitted).
  11. Liu, Y., **Bin-Mohsin, B.**, Hajaiej, H., Yao, P., Chen, G (2016). Exact controllability of structural acoustic interactions with variable coefficients, SIAM Journal on Control and Optimization, (accepted).
  12. **Bin-Mohsin, B.** and Lesnic, D. (2016) Meshless reconstruction of the support of a source, Advances in Boundary Element & Meshless Techniques XVII, (eds. M. Tezer-Sezgin, B. Karasozen and F.M.H. Aliabadi), Middle East Technical University, Ankara, Turkey, pp.23-28.

### ***Employment***

- Head of Mathematics Department, College of Sciences, King Saud University. 2014- 2016.
- Assistant Professor of Mathematics, College of Sciences, King Saud University. 2013- Now.
- Lecturer in Mathematics College of Teacher, King Saud University. 2006- 2013.

### ***Refereeing for Journals***

- International Journal of Computer Mathematics (2).
- Applied Numerical Mathematics (1).
- Inverse Problems in Science and Engineering (3).
- International Journal of Solids and Structures (1).