



## FACULTY FULL NAME: Mohamed Fahmi Ben Hassen

POSITION: Associate Professor

### Personal Data

Nationality | Tunisian

Date of Birth | ٢٣/٠٧/١٩٧٦

Department | Basic Sciences

Official UoD Email | mfhassen@iau.edu.sa

Office Phone No. | ٠١٣٣٣٥٧١٩

### Language Proficiency

| Language | Read | Write         | Speak |
|----------|------|---------------|-------|
| Arabic   |      | mother tongue |       |
| English  |      | Fluent        |       |
| French   |      | Fluent        |       |

### Academic Qualifications (Beginning with the most recent)

| Date | Academic Degree | Specialization field | University     |
|------|-----------------|----------------------|----------------|
| 2011 | Habilitation    | Applied Mathematics  | Tunis el Manar |
| 2004 | PhD             | Applied Mathematics  | Tunis el Manar |
| 1999 | Master          | Applied Mathematics  | Tunis el Manar |

### PhD, Master or Fellowship Research Title: (Academic Honors or Distinctions)

|            |  |
|------------|--|
| Fellowship | Post-doctoral fellowship, Institute for Numerical and Applied Mathematics, Georg-August-University Goettingen, Germany, ٢٠٠٤-٢٠٠٥. |
| PhD        | Recovery and identification of pointwise sources and small size inclusions, with honors  |
| Master     | Study of some inverse problems of identification of cavities and inclusions  |

### Professional Record: (Beginning with the most recent)

| Job Rank            | Place and Address of Work                   | Date                 |
|---------------------|---|----------------------|
| Associate Professor | Imam Abdulrahman University, Dammam, KSA    | Since September ٢٠١٣ |
| Associate Professor | University of Tunis-el Manar, Tunisia       | 2012-2013            |
| Assistant Professor | University of Tunis-el Manar, Tunisia       | 2006-2011            |
| Post-Doc            | Georg-August-University Goettingen, Germany | 2004-2005            |

### Administrative Positions Held: (Beginning with the most recent)

| Administrative Position | Office | Date |
|-------------------------|--------|------|
|-------------------------|--------|------|



|   |   |           |
|---|---|-----------|
| General Coordinator of the Humanities Track | Deanship of Preparatory and Support Studies, Imam Abdulrahman University. | 2017-2018 |
| Head of the Department of Basic Sciences    | Deanship of Preparatory and Support Studies, University of Dammam, KSA.   | 2014-2016 |

### Scientific Achievements

#### Published Refereed Scientific Researches

(In Chronological Order Beginning with the Most Recent)

| #  | Name of Investigator(s)                                      | Research Title  | Publisher and Date of Publication   |
|----|--|---|---|
| 1  | Ben Hassen, F.; Boukari, Y. and Haddar, H.                   | Application of the linear sampling method to identify cracks with impedance boundary conditions   | <i>Inverse Problems in Science and Engineering</i> , 2013                           |
| 2  | Ben Hassen, M.F.; Ivanyshyn, O. and Sini, M.                 | Three-dimensional acoustic scattering by complex obstacles: the accuracy issue  | <i>Inverse Problems</i> , 2010  |
| 3  | Ben Hassen, M.F.; Erhard, K. and Potthast, R.                | The singular sources method for 3d inverse acoustic obstacle scattering problem   | <i>IMA J. Appl. Math.</i> , 2010  |
| 4  | Ben Hassen, F.; Boukari, Y. and Haddar, H.                   | Inverse impedance boundary problem via the conformal mapping method: the case of small impedances   | <i>ARIMA</i> , 2010   |
| 5  | Ben Abda, A.; Ben Hassen, F.; Leblond, J. and Mahjoub, M.    | Sources recovery from boundary data: a model related to electroencephalography  | <i>Mathematical and Computer Modelling</i> , 2009                                   |
| 6  | Ben Hassen, M. F.; Potthast, R. and Liu, J.J.                | On source analysis by wave splitting with applications in inverse scattering of multiple obstacles  | <i>J. of Computational Math</i> , 2007  |
| 7  | Ben Hassen, M.F.; Erhard, K. and Potthast, R.                | The point source method for 3d reconstructions for the Helmholtz and Maxwell equations  | <i>Inverse Problems</i> , 2006  |
| 8  | Ben Hassen, F. and Bonnetier, E.                             | An asymptotic formula for the voltage potential in perturbed $\varepsilon$ -periodic composite medium containing misplaced inclusions of size $\varepsilon$ | <i>Proceedings of the Royal Society of Edinburgh. Section A. Mathematics</i> , 2006 |
| 9  | Baratchart, L.; Ben Abda, A.; Ben Hassen; F. and Leblond, J. | 'Recovery of pointwise sources and small size conductivity defaults by rational approximation'  | <i>Inverse Problems</i> , 2005  |
| 10 | Ben Hassen, F. and Bonnetier, E.                             | Asymptotic formulas for the voltage potential in a composite medium containing close or touching disks of small diameter                                    | <i>Multiscale Model. Simul.</i> , 2005  |

#### Scientific Research Papers Presented to Refereed Specialized Scientific Conferences

| # | Name of Investigator(s)                                 | Research Title   | Conference and Publication Date                                |
|---|---|--|--|
|   | Ben Hassen F, Leblond J, Paduret C, Rigat S and Zghal M | Sources Localisation in Ellipsoids by Best Rational Approximation in Planar Sections | Proceedings of the Institute of Acoustics Volume 30 Pt.2, 2008 |

#### Completed Research Projects

| # | Name of Investigator(s) | Research Title | Date |
|---|-------------------------|----------------|------|
|---|-------------------------|----------------|------|



| (Supported by) |  |   |           |
|----------------|--|---|-----------|
| 1              | M.F. Ben Hassen and H. Haddar<br>(STI, Tunisian universities-INRIA France) | Innovative methods in imaging and non-destructive testing of structures | 2008-2009 |

#### Contribution to Scientific Conferences and Symposia

| #  | Conference Title   | Place and Date of the Conference        | Extent of Contribution  |
|----|--|---|-------------------------|
| 1  | Numerical Mathematics and Application to some Challenging Problems (Numac 2013)                  | June 24-26, 2013, Sevilla, Spain.       | <i>Invited Speaker</i>  |
| 2  | 6th International Conference on Inverse Problems, Control and Shape Optimization (PICO'12)       | April 2-4, 2012, Paris, France.         | <i>Invited Speaker.</i> |
| 3  | Contrôle, Imagerie et Probabilités en Méditerranée (CIPM2011)                                    | October 24-28, 2011, Nice, France.      | <i>Invited Speaker.</i> |
| 4  | 5th International Conference on Inverse Problems, Control and Shape Optimization (PICO'10)       | April 7-9, 2010, Cartagena, Spain.      |                         |
| 5  | Workshop on Inverse Problems for Waves: Methods and Applications                                 | March 29-30, 2010, Palaiseau, France.   |                         |
| 6  | 10th International Workshop on Optimization and Inverse Problems in Electromagnetism (OIPE 2008) | September 14-17, 2008, Ilmenau, Germany |                         |
| 7  | Spring Conference of the Institute of Acoustics 2008: Widening Horizons in Acoustics             | April 10-11, 2008, Reading, UK          |                         |
| 8  | The 8th International Conference on Mathematical and Numerical Aspects of Waves (Waves 2007)     | July 23-27, 2007, Reading, UK           |                         |
| 9  | Conférence Euro-Méditerranéenne sur les Biomathématiques   | June 26-28, 2007, Cairo, Egypt          |                         |
| 10 | The Mathematics of Finite Elements and Applications (MAFELAP'06)                                 | June 13-16, 2006, London, UK            |                         |
| 11 | Inverse Problems, Control and Shape Optimization (PICO'06)                                       | April 5-7, 2006, Nice, France           |                         |
| 12 | Eighth U.S. National Congress on Computational Mechanics (USNCCM8)                               | July 24-28, 2005, Austin, Texas, USA    |                         |
| 13 | Trends in Applied Mathematics in Tunisia, Algeria, Morocco                                       | April 14-18, 2003, Morocco              |                         |
| 14 | Applied Math. Applic. of Math. (AMAM'2003)   | February 10-13, 2003, Nice, France      |                         |
| 15 | Workshop on Inverse Obstacle Problems (WIOP02)   | November 4-6, 2002, Lisbon, Portugal    |                         |
| 16 | The First International Conference on Inverse Problems: Modeling and Simulation                  | July 14-21, 2002, Fethiye, Turkey.      |                         |
| 17 | Inverse Problems, Control and Shape Optimization (PICO'02)                                       | April 10-12, 2002, Tunis                |                         |
| 18 | 32ème Congrès National d'Analyse Numérique (CANUM 2000)  | June 5-9, 2000, France                  |                         |

#### Supervision of Master and/or PhD Thesis

| # | Degree Type | Title | Institution                  | Date |
|---|-------------|-------|------------------------------|------|
|   | PhD         |       | University of Tunis el Manar | 2012 |



|           |  |                              |             |
|-----------|--|------------------------------|-------------|
| 7 masters |  | University of Tunis el Manar | 2007 - 2012 |
|-----------|--|------------------------------|-------------|

**Committee and Community Service (Beginning with the most recent)**

**Committee Membership**

| # | From | To   | Position   | Organization  |
|---|------|------|--|---|
|   | 2018 | -    | Coordinator of the committee of follow up of the implementation of the Strategic Plan  | Deanship of Preparatory Year, Imam Abdulrahman University                                       |
|   | 2017 | -    | Committee Leader for Mathematics and Statistics Courses Development Committee, Quality Assurance System Dashboard program (QASD) | Imam Abdulrahman University   |
|   | 2016 | -    | Coordinator of the Committee for design and preparation of Mathematics and Statistics Textbooks                                  | Deanship of Preparatory Year, Imam Abdulrahman University                                       |
|   | 2016 |      | Member of the Committee for the development of the Engineering Track program   | Imam Abdulrahman University   |
|   | 2015 | 2016 | Coordinator of the Academic Advising Committee   | Deanship of preparatory and support studies, University of Dammam                               |
|   | 2015 | 2016 | The Studies and Research Committee   | Deanship of preparatory and support studies, University of Dammam                               |
|   | 2015 | 2016 | Developing Educational Skills Committee  | Deanship of preparatory and support studies, University of Dammam                               |
|   | 2014 | -    | Committee for Employment of foreign teachers   | Department of Basic Sciences, Deanship of preparatory and support studies, University of Dammam |
|   | 2013 |      | Committee for selection of candidates for entry into engineering schools   | University of Tunis el Manar, Tunisia   |
|   | 2013 |      | The Organizing Committee of 11th International conference: mathematical & numerical aspects of Waves (WAVES'2013)                | Tunis, Tunisia  |
|   | 2012 |      | The Organizing Committee of the International Conference on Spectral and High Order Methods (ICOSAHOM 2012)                      | Tunis, Tunisia  |
|   | 2007 | 2013 | Committee for selection of candidates for entry into the first year of Master of Applied Mathematics                             | University of Tunis el Manar, Tunisia   |
|   | 2007 |      | The Organizing Committee of the International Conference on Numerical Methods and Modelling (MEMO'07)                            | Tunis, Tunisia  |

**Scientific Consultations**

| # | From | To | Institute                | Full-time or Part-time  |
|---|------|----|--------------------------|---|
|   |      | -  | Institute of Physics IoP | Peer-review of scientific publications for Inverse Problems journal |



|  |      |  |   |   |
|--|------|--|---|---|
|  |      |  | Inverse Problems in Science & Engineering journal   | Peer-review of scientific publications            |
|  |      |  | <b>Acta Mathematica Scientia journal (AMASCI)</b>   | Peer-review of scientific publications            |
|  |      |  | <b>European J. of Mechanics - A/Solids (EJMSOL)</b> | Peer-review of scientific publications            |
|  | 2014 |  | <b>University of Sfax, Tunisia</b>                  | External referee for doctoral thesis of N. Mars   |
|  | 2012 |  | <b>University of Nice-Sophia, France</b>            | External referee for doctoral thesis of A.M. Nicu |

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Last Update

06/12/2018