

# CURRICULUM VITAE

## PERSONAL INFORMATION

- **Name:** MAHMOUD HASSAN DAR ASSI
- **Place and date of birth:** Zarqa-Jordan, 06/ 24/ 1978
- **Nationality:** Jordanian
- **Marital status:** Married (Son and three daughters)
- **Sex:** Male
- **Phone number:** +962 796668613 (Cellphone)
- **E-mail:** m.assi@psut.edu.jo

## EDUCATION

- **Ph.D.** in Applied Mathematics, **The University of Alabama**, USA, 2014, with 4 out of 4. **Rating: Excellent.**  
**Dissertation:** "Asymptotic Analysis of Mass-Dominated Convection in A Nanofluid"  
**Advisor:** L. Hadji, email: lhadji@ua.edu.
- **M.A.** in Mathematics, **The University of Alabama**, USA, 2011, with 4 out of 4.  
**Rating: Excellent.**
- **M.Sc.** in Mathematics, **The University of Jordan**, Jordan, 2002, with 3.37 out of 4.  
**Rating: Very good.**  
**Thesis:** "Fuzzy Differential Equations"  
**Advisor:** Nabil Shawagfeh, email: shawagnt@ju.edu.jo.
- **B.Sc.** in Mathematics, **Hashemite University**, Jordan, 2000, with 3.75 out of 4. **Rating: Excellent.**

## AWARDS and ACHIEVEMENTS

- Graduate School fellowship award, **The University of Alabama**, Tuscaloosa, AL35487, Spring 2014 semester.
- Graduate teaching assistantship, **The University of Alabama**, Tuscaloosa, AL35487, 2009-2013.
- Scholarship from The Hashemite University to get a master's in Mathematics, 2000-2002.
- Placed on the University honor list, **The Hashemite University**, Zarqa, Jordan, 1998.
- Placed on the Faculty honor list, **The Hashemite University**, Zarqa, Jordan, 1997,1998,2000.
- University Prize for the Best All Round Graduating Math Student, **The Hashemite University**, Zarqa, Jordan, 2000.
- Erasums+ grant for one week of mobility teaching in the University of Almeria, Spain, 5-11 February 2017.
- Erasums+ grant for one week of mobility teaching in the University of Santiago de Compostela, Spain, 13-17 September 2021.
- Erasums+ grant for one week of mobility teaching in the University of Minho, Portugal, 26 June - 2 July 2022.

## **TEACHING EXPERIENCE**

- September 2014 - Now: **Princess Sumaya University for Technology**, Al-Jubaiha Amman 11941, P.O. Box 1438 Jordan  
Associate Professor at the Department of Basic Sciences. I taught the following courses:  
**Calculus for Business**  
**Calculus I**  
**Calculus II**  
**Calculus III**  
**Linear Algebra**  
**Discrete Mathematics I**  
**Discrete Mathematics II**  
**Mathematics for Engineering I**  
**Mathematics for Engineering II**  
**Statistical Methods**  
**Statistical Methods for Business**  
**Statistical Methods for IT**  
**Numerical Analysis**  
**Applied Probability for IT**  
**Applied Probability for Engineering**  
**Mathematical Decision Making (Graduate course)**  
**Engineering Decision Making under Uncertainty (Graduate course).**
- January 2009 - December 2013: **The University of Alabama**, Tuscaloosa, AL35487  
Teaching Assistant at the Department of Mathematics. I taught the following courses:  
**Intermediate Algebra, MATH100**  
**Finite Mathematics, MATH110 (Online course).**  
**Precalculus Algebra, MATH112**  
**Precalculus Trigonometry, MATH113**  
**Precalculus, MATH115**  
**Business Calculus, MATH121**  
**Applied Ordinary Differential Equations I, MATH238.**
- September 2002 – December 2008: **The Hashemite University**, Zarqa, Jordan  
Teaching Assistant at the Department of Mathematics. I taught the following courses:  
**Linear Algebra I**  
**Biostatistics**  
**Statistical Methods I**  
**Ordinary Differential Equations I**  
**Calculus I and II**  
**Statistics for Economics and Business**  
**Mathematics for Economics and Business**
- February 2000 – March 2001: **Ministry of Education**, Jordan  
Teacher of Mathematics.

## **COMPUTER SKILLS**

- MATLAB, MAPLE, LATEX, Decision Tool Suit and MS-Office.

## **PROFESSIONAL AFFILIATIONS**

- Member, **Society for Industrial and Applied Mathematics (SIAM)**

## LANGUAGES

- Arabic: mother tongue.
- English: fluent.

## PUBLICATIONS

- Hadji, L and DarAssi, M.H.; *Influence of sedimentation on the threshold for Soret-driven convection in colloidal suspensions*, **Physical Review E**, **89**, 2014, 013014-1-13.
- DarAssi, M.H.; *Convection in moderately high concentrated colloidal suspensions*, **International Journal of Pure and Applied Mathematics**, **115**, 2017, 835-850.
- Ahmad, A, Abu hour, Y and DarAssi, M.H.; *Advance System and Model to Predict Malicious Files Prorogation inside Computer Network*, **IET Networks**, **8**, 2019, 38-47.
- DarAssi, M.H., Safi, M and Hdaibat, B; *A delayed SEIR epidemic model with pulse vaccination and treatment*, **Nonlinear Studies**, **25**, 2018, 521-534.
- Safi, M and DarAssi, M.H.; *Mathematical analysis of ectoparasite-borne diseases model*, **Mathematical Methods in the Applied Sciences**, **41**, 2018, 8248-8257.
- Safi, M and DarAssi, M.H.; *Mathematical analysis of an age-structured HSV-2 model*, **Journal of Computational Methods in Science and Engineering**, **19**, 2019, 841-856.
- Muhammad Altaf Khan, Khanadan Khan, Safi M and DarAssi M.H.; *A Discrete Model of TB Dynamics in Khyber Pakhtunkhwa-Pakistan*, **Computer Modeling in Engineering and Sciences**, **123**, 2020, 777-795.
- DarAssi, M.H. and Abu hour, Y; *Residual power series technique for solving Fokker-Plank equation*, **Italian Journal of Pure and Applied Mathematics**, **44**, 2020, 319-332.
- Ahmad, A, Abu hour, Y and DarAssi, M.H.; *Effects of Computer Networks Viruses under the Influence of Removable Devices*, **International Journal of Dynamical Systems and Differential Equations**, **10**, 3, 2020, 233-248.
- Khader, M and DarAssi, M.H.; *Residual power series method for solving nonlinear reaction-diffusion-convection problems*, **Boletim da Sociedade Paranaense de Matemática** **39** (3), 177-188.
- Alrabaiah H, Safi M, DarAssi, M.H., Al-Hdaibat B, Saif Ullah, Khan MA, Ali Shah S; *Optimal control analysis of hepatitis B virus with treatment and vaccination*, **Results in Physics**, 2020, 20, 103599.
- Safi, M.A., Al-Hdaibat, B., DarAssi, M.H., Khan, M.A; *Global dynamics for a discrete quarantine/isolation model*, **Results in Physics**, 2021, 21, 103788.
- DarAssi, M.H. and Safi, M; *Analysis of an SIRS Epidemic Model for a Disease Geographic Spread*, **Nonlinear Dynamics and Systems Theory** **21** (1), 56-67.
- DarAssi, M.H., Safi, M and Ahmad, M; *Global dynamics of a discrete-time mers-cov model*, **Mathematics** 2021, 9(5), 563.
- DarAssi, M.H.; *Convective Stability of CO2 Sequestration in a Porous Medium*, **Nonlinear Dynamics and Systems Theory** **21** (2), 179-192.

- DarAssi, M.H., Safi, M.A., Khan, M.A., Beigi, A., Aly, A.A. and Alshahrani, M.Y; *A mathematical model for SARS-Cov-2 in variable-order fractional derivative*, **The European Physical Journal Special Topics (2022)**.
- DarAssi, M.H., Shatanawi, T.M. and Safi, M.A; *Mathematical Analysis of a MERS-Cov Coronavirus Model*, **Demonstratio Mathematica**, vol. 55, no. 1, 2022, pp. 265-276. <https://doi.org/10.1515/dema-2022-0022>.
- Sun, T.-C., DarAssi, M.H., Bilal, M., and Khan, M.A. *The study of Darcy-Forchheimer hybrid nanofluid flow with the thermal slip and dissipation effect using parametric continuation approach over a rotating disk*, **Waves in Random and Complex Media**, 2022.
- Li, X.-P., DarAssi, M.H., Khan, M.A., Chukwu C.W., Alshahrani M.Y., Shahrani, M.A., and Riaz, M.B. *Assessing the potential impact of COVID-19 Omicron variant: Insight through a fractional piecewise model*, **Results in Physics**, 2022, 38, 105652.
- Asma, Yousaf, M., Afzal, M., DarAssi, M.H., Khan, M. A., Alshahrani, M.Y., and Suliman, M.; *A Mathematical Model of Vaccinations Using New Fractional Order Derivative*, **Vaccines**, 2022, 10 (12), 1980.
- DarAssi, M.H. and Safi, M; *Global dynamics of a discrete SEIR epidemic model with treatment*, **Boletim da Sociedade Paranaense de Matemática**, 2023, 41.
- DarAssi, M.H., Khan, M. A., Fatmawati, and Alqarni, M.S.; *Analysis of the Competition System Using Parameterized Fractional Differential Equations: Application to Real Data*, **Symmetry**, 2023, 15 (12), 542.
- Sun, T.-C.; DarAssi, M.H.; Alfwzan, W.F.; Khan, M.A.; Alqahtani, A.S.; Alshahrani, S.S.; Muhammad, T. *Mathematical Modeling of COVID-19 with Vaccination Using Fractional Derivative: A Case Study*, **Fractal Fract.** 2023, 7, 234.

#### PROCEEDINGS

- DarAssi, M and Hadji, L; *Analysis of the Interplay Between Sedimentation and Thermophoresis in the Presence of Convection in Colloidal Suspensions*, **Proceedings of the ASME 2014 4th Joint US-European Fluids Engineering Division Summer Meeting**, 2014.
- Alsarraj E, Rahamneh T, Alzaq Z, DarAssi M; *A Study of Using Decision Making Under Uncertainty Tools to Increase the Distance Learning Stakeholders Satisfaction in Jordan*, **Proceedings of the Innovation and New Trends in Engineering, Science and Technology Education Conference, IETSEC2021**.

## CONFERENCES and MEETINGS

- The SIAM Conference on Computational Science and Engineering (CSE23), Amsterdam-Netherlands, 2023.
- The 2nd Mediterranean International Conference of Pure&Applied Mathematics and Related Areas, Paris-France, 2019.
- The sixth international Arab conference on Mathematics, Zarqa University, Zarqa, Jordan, 2019.
- Arizona School of Analysis and Mathematical Physics, Tucson, Arizona, 2018.
- The 42nd SIAM-SEAS conference, Chapel Hill, North Carolina, 2018.
- The World Science Forum, King Hussein Bin Talal Convention Center, Dead sea, Jordan, 2017.
- The fifth international Arab conference on Mathematics, Zarqa University, Zarqa, Jordan, 2016.
- Matlab and Applied Mathematics workshop, Al-Hussein Bin Talal University, Ma'an, Jordan, 2016.
- The 40th SIAM-SEAS conference, Athens, Georgia, 2016.
- The 39th SIAM-SEAS conference, Birmingham, Alabama, 2015.
- American Physical Society 65th Annual Fall DFD Meeting, San Diego, California, 2012.
- University of Alabama Applied Mathematics Joint Program Meeting, Huntsville, Alabama, 2009.

## UNIVERSITY and COMMUNITY SERVICES

- Head of Department of Basic Sciences 2021/2022-2022/2023.
- Department Social Committee 2015-2021.
- Council Secretary of the Department of Basic Sciences 2016/2017.
- Scientific research committee 2017/2018-2020/2021.
- School of Engineering Students' disciplinary committee 2018 - Present
- Disabled students' requirement committee 2019/2020, 2020/2021.
- School of Engineering Council 2018/2019, 2019/2020, 2021/2022, and 2022-2023.
- University Council 2018/2019, 2020/2021
- JOVITAL project management committee 2018.
- Basic Sciences Department faculty hiring committee 2018/2019 - 2021/2022.
- TPC chair of IETSEC 2021 conference.
- Jordan Young Scientists competition judge.

- National Scientific Olympiad steering and organizing committee, 2019/2020-present.
- Voluntary trainer with INJAZ on success skills at The Hashemite University, 2002-2008.
- Board member at the National Forum for Youth and Culture: Jordan Youth, 2003-2004.
- T.O.T. in Conflicts Resolution and Mediation, “Friedrich Naumann Foundation and LNCR (Lebanon Network for Conflicts Resolution)”, Mar. 2002 - Jan. 2003.
- Participatory, Gender Sensitive Management of Adolescent Development Programs, “UNICEF and the National Institute for Training (NIT)”, July – August 2002.

## REFERENCES

### 1. The University of Alabama

- Professor Layachi Hadji, Mathematics Department.  
E-mail: lhadji@as.ua.edu
- Professor Tavan Trent, Mathematics Department.  
E-mail: ttrent@as.ua.edu

### 2. Mathematics Technology Learning Center, MTLC

- Ms. Jamie Glass, MTLC.  
E-mail: jglass@as.ua.edu
- Ms. Jil Chambless, MTLC.  
E-mail: jchambless@as.ua.edu
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