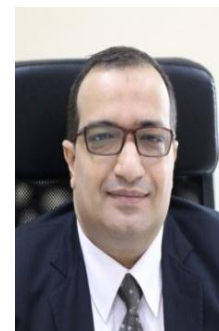# CURRICULUM VITAE

Emad Hassan Aly

BSc (**Honor**), General Dipl. (**Honor**), Special Dipl. (**Honor**),
MSc&Edu (Ain Shams, **Egypt**), MSc by Research (Leeds, **UK**), PhD (Loughborough, **UK**)

- International Best Researcher Award (ISSN **Golden Prize** 2020 from India)
- **TWO** Full Professorships in Applied Mathematics in 2019&2020 (H-index: **18**)
- **Trainer** for the Faculty and Leadership Development
- 7-Years General **Coordinator** for the Preparatory Year in University of Jeddah

Personal Details:

Permanent address:
Department of Mathematics
Faculty of Education
Ain Shams University
Cairo 11757, Egypt

Current address:
Department of Mathematics
Faculty of Science
University of Jeddah
Jeddah 21589, Saudi Arabia

Telephones: +2 01156191298 & +966 (0)534023730
Email: emad-aly@hotmail.com & efarag@uj.edu.sa

Education:

1. 2003 –2007 PhD (Applied Mathematics for Engineering) from Loughborough University (**UK**) Thesis title "*Modelling the Behaviour of Soil-Cooling Tower-Interaction*"
2. 2001 –2002 MSc by Research (Applied Mathematics) from Leeds University (**UK**) Thesis title "*Some Computational Problems in Porous Media*"
3. 1997 –1999 Master in Science (Applied Mathematics), **EXCELLENT**. Thesis title "*Electrohydrodynamic Kelvin-Helmholtz Instability with Heat and Mass Transfer*"
4. 1995 –1996 Special Diploma in Science (Applied Mathematics), **EXCELLENT** (91%) top of my year over the all Faculty Departments.
5. 1994 –1995 General Diploma in Science (Mathematics), **EXCELLENT** (87%) top of my year.
6. 1990 –1994 BSc (Mathematics), **EXCELLENT** (90%) with honours in every year and come top of my year out of 250 students.

Qualifications 3 to 6 were awarded from Ain Shams University (Egypt).

Career History:

Dates	Job Title	Place
* 08/2014 – 03/2016	* Associate Professor	Department of Mathematics Faculty of Science King Abdulaziz University
* 09/2011 – 08/2014	* Assistant Professor	Jeddah, Saudi Arabia
12/2019 – Present	* Professor	Department of Mathematics
07/2014 – 11/2019	* Associate Professor	Faculty of Education
02/2008 – 09/2011	* Lecturer	Ain Shams University
09/1999 – 01/2008	* Assistant Lecturer	Cairo, Egypt.
03/1995 – 08/1999	* Demonstrator	

1.	2022	Certificate of Recognition	Pearson (UK)
2.	2006-2007	Postdoctoral Research Associate,	Loughborough University (UK)
3.	2003-2007	PhD studentship,	Loughborough University (UK)
4.	2003	Partial Scholarship	Royal Society of London (UK)
5.	2002	Partial Scholarship	Leeds University (UK)
6.	2001	MSc Scholarship	King Faisal Foundation (KSA)
7.	1997	A prize for coming top amongst all postgraduate students in the Faculty.	Egyptian Government
8.	1990-1994	Award for the top faculty students.	Egyptian Government

Research Experience (0000-0001-7432-193X)

(A) List of Publication and Collaboration

1- Papers in Refereed Journals:

[1] **E.H. Aly**, L. Elliott, D.B. Ingham, Mixed convection boundary-layer flow over a vertical surface embedded in a porous medium, European Journal of Mechanics B-Fluids, 22 (2003) 529-543.
This paper has become a standard in its field used as a basis for further work and comparison by many researchers in the area. It has been therefore referred as one of the most important contributions in the area, listed as one of the Top 50 (ranked 27) most downloaded articles at ScienceDirect on the period 01/2000 to 01/2006 and cited by 36 papers and two books.

[2] E. Magyari, **E.H. Aly**, Exact analytical solution for a thermal boundary layer in a saturated porous medium, Applied Mathematics Letters, 19 (2006) 1351–1355.

[3] E. Magyari, **E.H. Aly**, Mechanical and thermal characteristics of a mixed convection boundary-layer flow in a saturated porous medium, , International Journal of Heat and Mass Transfer, 49 (2006) 3855–3865, Accepted with no corrections.

[4] **E.H. Aly**, M. Benlahsen, M. Guedda, Similarity solutions of a MHD boundary-layer flow past a continuous moving surface, International Journal of Engineering Science, 45 (2007) 486-503.
ScienceDirect Top 25 hottest articles (ranked 19) on the period July–September 2007.

[5] A. Ebaid, **E.H. Aly**, On a new aftertreatment technique for differential transformation method and its application to nonlinear oscillatory systems, International Journal of Nonlinear Science, 8 (2009) 488–497.

[6] M. Guedda, **E.H. Aly**, A. Ouahsine, Analytical and ChPDM analysis of MHD mixed convection over a vertical flat plate embedded in a porous medium filled with water at $4^{\circ}C$, Applied Mathematical Modelling, 35 (2011) 5182–5197.

[7] **E.H. Aly**, H.A.S. Hussein, Solution for steady flow over a rotating disk in porous media with heat transfer, Journal of Applied Sciences Research, 7 (2011) 1485–1491.

[8] A. Ebaid, **E.H. Aly**, Exact solutions for the transformed reduced Ostrovsky equation via the F-expansion method in terms of Weierstrass–elliptic and Jacobian–elliptic functions, Wave Motion, 49 (2012) 296–308.
ScienceDirect Top 25 hottest articles (ranked 16) on the period January–March 2012.

[9] **E.H. Aly**, A. Ebaid, R. Rach, Advances in the Adomian decomposition method for solving two-point nonlinear boundary value problems with Neumann boundary conditions, Computers and Mathematics with Applications, 63 (2012) 1056–1065.
ScienceDirect Top 25 hottest articles (ranked 14) on the period January-March 2012.
Most Downloaded Articles (ranked 9) on the period April–June 2012.

[10] C. Chun, A. Ebaid, M.Y. Lee, **E.H. Aly**, An approach for solving singular two-point boundary value problems: analytical and numerical treatment, Australian and New Zealand Industrial and Applied Mathematics Journal, 53E (2012) 21–43.

[11] **E.H. Aly**, A. Ebaid, On the exact analytical and numerical solutions of nano boundary–layer fluid flows, Abstract and Applied Analysis, vol. 2012, Article ID 415431, 22 pages, 2012, DOI:10.1155/2012/415431.

[12] **E.H. Aly**, A. Ebaid, New exact solutions for boundary-layer flow of a nanofluid past a stretching sheet, Journal of Computational and Theoretical Nanoscience, 10 (11) (2013) 2591–2594.

[13] A.M. Kozae, S.A. El–Sheikh, **E.H. Aly**, M. Hosny, Rough sets and its applications in a computer network, Annals of Fuzzy Mathematics and Informatics, 6 (3) (2013) 605–624.

[14] A. Ebaid, **E.H. Aly**, Exact analytical solution of the peristaltic nanofluids flow in an asymmetric channel with flexible walls and slip condition: Application to the cancer treatment, Computational and Mathematical Methods in Medicine, vol. 2013, Article ID 825376, 8 pages, 2013, DOI:10.1155/2013/825376

[15] **E.H. Aly**, A. Ebaid, New theoretical and numerical solutions for mixed convection boundary-layer nanofluid flow along an inclined plate embedded in a porous medium, Journal of Applied Mathematics, in the special issue: *Mathematical and Numerical Modeling of Flow and Transport*, vol. 2013, Article ID 219486, 7 pages, 2013. DOI: 10.1155/2013/219486.

[16] **E.H. Aly**, A. Ebaid, Exact analytical solution for suction and injection flow with thermal enhancement of five nanofluids over an isothermal stretching sheet with effect of the slip model: A comparative study, Abstract and Applied Analysis, in the special issue: *Mathematical and Computational Analysis of Flow and Transport Phenomena*, vol. 2013, Article ID 721578, 12 pages, 2013. DOI: 10.1155/2013/721578

[17] **E.H. Aly**, M.A. Hassan, Suction and injection analysis of MHD nano boundary–layer over a stretching surface through a porous medium with partial slip boundary condition, Journal of Computational and Theoretical Nanoscience, 11 (3) (2014) 827–839.

[18] **E.H. Aly**, H.M. Sayed, Thermal radiation effects on magnetohydrodynamic boundary-layer flow due to a moving extensible surface in nanofluids, Journal of Computational and Theoretical Nanoscience, 11 (8) 2014, 1756–1765.

[19] **E.H. Aly**, A. Ebaid, N.Y. Abd Elazem, Analytical and numerical investigations for the flow and heat transfer of nanofluids over a stretching sheet with partial slip boundary condition, Applied Mathematics & Information Sciences 8 (2014) 1639–1645.

[20] **E.H. Aly**, A. Ebaid, Exact analytical solution for the peristaltic flow of nanofluids in an asymmetric channel with slip effect of the velocity, temperature and concentration, Journal of Mechanics, 30 (4) (2014) 411–422.

[21] **E.H. Aly**, K. Vajravelu, Exact and numerical solutions of MHD nano boundary-layer flows over stretching surfaces in a porous medium, Applied Mathematics and Computation, 232 (2014) 191–204.

[22] **E.H. Aly**, A. Ebaid, Effect of the velocity second slip boundary condition on the peristaltic flow of nanofluids in an asymmetric channel: Exact solution, Abstract and Applied Analysis, in the special issue: *Analytical and Numerical Approaches for Complicated Nonlinear Equations*, vol. 2014, Article ID 191876, 11 pages, 2014. DOI: 10.1155/2014/191876.

[23] **E.H. Aly**, Effect of the velocity slip boundary condition on the flow and heat transfer of nanofluids over a stretching sheet, Journal of Computational and Theoretical Nanoscience 12 (2015) 2428–2436.

[24] S. Akram, **E.H. Aly**, S. Nadeem, Effects of metachronal wave on biomagnetic Jeffery fluid with inclined magnetic field, Rev. Tec. Ing. Univ. Zulia. 38 (2015) 18–28.

[25] B. Alkahtani, M. Subhas Abel, **E.H. Aly**, Magnetohydrodynamic steady boundary layerstagnation point of nanofluid Flow with Heat and mass transfer over a stretching sheet with Full slip effects, Journal of Computational and Theoretical Nanoscience 12 (12) (2015) 5379–5385.

[26] **E.H. Aly**, Radiation and MHD boundary layer stagnation-point of nanofluid flow towards a stretching sheet embedded in a porous medium: Analysis of suction/injection and heat generation/absorption with effect of the slip model, Math. Probl. Eng., in the special issue:

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Macroscopic/Mesoscopic Computational Materials Science Modeling and Engineering, Vol. 2015 (2015), Article ID 563547, 20 pages.

[27] B. Alkahtani, M. Subhas Abel, **E.H. Aly**, Analysis of fluid motion and heat transport on magnetohydrodynamic boundary layer past a vertical power law stretching sheet with hydrodynamic and thermal slip effects, AIP Advances 5, 127228 (2015).

[28] M.F. El-Sayed, H.N.A. Ismail, **E.H. Aly**, N.F. Abdalla, The stagnation point MHD flow and heat transfer of micropolar fluid over a stretching sheet in the presence of radiation, heat generation and dissipations, International Journal of Advances in Applied Mathematics and Mechanics 3 (2015) 84-99.

[29] N.Y Abd Elazem, A. Ebaid, **E.H Aly**, Radiation Effect of MHD on Cu-water and Ag-water Nanofluids Flow over a Stretching Sheet: Numerical Study, Applied & Computational Mathematics 4 (4) 1000235: 2015.

[30] **E.H. Aly**, A. Ebaid, Exact analysis for the effect of heat transfer on MHD and radiation Marangoni boundary layer nanofluid flow past a surface embedded in a porous medium, Journal of Molecular Liquids 215 (2016) 625–639.

[31] N.C. Roşca, A.V. Roşca, **E.H. Aly**, I. Pop, Semi-analytical solution for the flow of a nanofluid over a permeable stretching/shrinking sheet with velocity slip using Buongiorno's mathematical model, European Journal of Mechanics B-Fluids 58 (2016) 39–49.

[32] M.F. El-Sayed, H.N.A. Ismail, **E.H. Aly**, N.F. Abdalla, Numerical solution of MHD flow of Casson fluid between two parallel plates with dissipations, Asian Journal of Mathematics and Computer Research 8 (2016) 149–162.

[33] **E.H. Aly**, H.M. Sayed**,** A comparative study of five nanouids for heat transfer of squeezing and unsteady flow between two parallel plates with Vogel's model of viscosity, Journal of Computational and Theoretical Nanoscience 13 (2016) 3097–3104.

[34] H.M. Sayed**, E.H. Aly**, Heat transfer of squeezing and unsteady flow between two parallel plates with Reynold's model of viscosity: A comparative study for five nanofluids, Journal of Computational and Theoretical Nanoscience 13 (2016) 5051–5059.

[35] H.M. Sayed, **E.H. Aly**, K. Vajravelu, Influence of slip and convective boundary conditions on peristaltic transport of non-Newtonian nanofluids in an inclined asymmetric channel, Alexandria Engineering Journal 55 (2016) 2209–2220.

[36] **E.H. Aly**, Existence of the multiple exact solutions for nanofluid flow over a stretching/shrinking sheet embedded in a porous medium at the presence of magnetic field with electrical conductivity and thermal radiation effects, Powder Technology 301 (2016) 760–781.

[37] B. Alkahtani, M. Subhas Abel, **E.H. Aly**, Effects of the velocity slip on a viscous dissipation of MHD flow and heat transfer over a thin liquid film on an unsteady stretching sheet, Revista Mexicana de Física 62 (2016) 576–585.

[38] **E.H. Aly**, H.M. Sayed, Magnetohydrodynamic and thermal radiation effects on the boundary-layer flow due to a moving extensible surface with the velocity slip model: A comparative study of four nanofluids, Journal of Magnetism and Magnetic Materials 422 (2017) 440–451.

[39] A. Ebaid, **E.H. Aly**, K. Vajravelu, Analytical solution for the peristaltic transport of viscous nanofluid in an asymmetric channel with full slip and convective conditions, Communications in Theoretical Physics 68 (2017) 96–102.

[40] A. Ebaid, **E.H. Aly**, Additional results for the peristaltic transport of viscous nanofluid in an asymmetric channel with effects of the convective conditions, National Academy Science Letters, 41 (2018) 59-64.

[41] **E.H. Aly**, A comparative study of nanofluids' effect on decreasing the water velocity flowing from the torrents, Journal of Computational and Theoretical Nanoscience 15 (2018) 1876-1885.

[42] **E.H. Aly**, Dual exact solutions of graphene-water nanofluid flow over stretching/shrinking sheet with suction/injection and heat source/sink: Critical values and regions with stability, Powder Technology, 342 (2019) 528–544.

[43] **E.H. Aly**, I. Pop, MHD flow and heat transfer over a permeable stretching/shrinking sheet in a hybrid nanofluid with a convective boundary condition, Int. J. Numer. Meth. Heat Fluid Flow 29 (2019) 3012-3038.

[44] **E.H. Aly**, Catalogue of existence of the multiple physical solutions of hydromagnetic flow over a stretching/shrinking sheet for viscoelastic second-grade and Walter's B fluids, Phy. Scr. 94 (2019) 105223 (16pp).

[45] S. Akram, **E.H. Aly**, F. Afzal, S. Nadeem, Effect of the Variable Viscosity on the Peristaltic Flow of Newtonian Fluid Coated with Magnetic Field: Application of Adomian Decomposition Method for Endoscope, Coatings 9 (2019) 524 (18pp).

[46] **E.H. Aly**, I. Pop, Merkin and Needham wall jet problem for hybrid nanofluids with thermal energy, European Journal of Mechanics B-Fluids 83 (2020) 195–204.

[47] A. Ebaid, A.F. Aljohani, **E.H. Aly**, Homotopy perturbation method for peristaltic motion of gold-blood nanofluid with heat source, Int. J. Numer. Meth. Heat Fluid Flow, 30 (2020) 3121-3138.

[48] N. Saleem, S. Akram, F. Afzal, **E.H. Aly**, A. Hussain, Impact of velocity second slip and inclined magnetic field on peristaltic flow coating with Jeffrey fluid in tapered channel, Coatings 2020, 10, 30; doi:10.3390/coatings10010030.

[49] **E.H. Aly**, I. Pop, MHD flow and heat transfer near stagnation point over a stretching/shrinking surface with partial slip and viscous dissipation: Hybrid nanofluid versus nanofluid, Powder Technology 367 (2020) 192–205.

[50] S. Manjunatha, B.A. Kuttan, G.K. Ramesh, B.J. Gireesha, **E.H. Aly**, 3D flow and heat transfer of micropolar fluid suspended with mixture of nanoparticles (Ag-CuO/H_2O) driven by an exponentially stretching surface, Multidiscipline Modeling in Materials and Structures 16 (2020) 1691-1707.

[51] S. Akram, Q. Afzal, **E.H. Aly**, Half-breed effects of thermal and concentration convection of peristaltic pseudoplastic nanofluid in a tapered channel with induced magnetic field, Case Studies in Thermal Engineering, 22 (2020) 100775.

[52] **E.H. Aly**, I. Pop, Radiation and mixed convection MHD boundary layer of hybrid Cu-Al_2O_3/water nanofluid flow over a wall jet, Journal of Nanofluids, 9 (2020) 152–160.

[53] H.M. Sayed, **E.H. Aly**, Electro-Thermo-Convection flow of conducting non-Newtonian fluid over upright wavy cone alongside irregular electrical conductivity, J. Math. Comput. Sci. 11 (2021) 477-493.

[54] **E.H. Aly,** A. Ebaid, MHD Marangoni boundary layer problem for hybrid nanofluids with thermal radiation, Int. J. Numer. Meth. Heat Fluid Flow 31 (2021) 897-913.

[55] **E.H. Aly**, A.V. Rosca, N.C. Rosca, I. Pop, Convective heat transfer of a hybrid nanofluid over a nonlinearly stretching surface with radiation effect, Mathematics 9 (2021) 2220.

[56] N.C. Rosca, A.V. Rosca, **E.H. Aly**, I. Pop, Flow and heat transfer past a stretching/shrinking sheet using modified Buongiorno nanoliquid model, Mathematics 9 (2021) 3047.

[57] J.K. Madhukesh, G.K. Ramesh, **E.H. Aly**, A.J. Chamkha, Dynamics of water conveying SWCNT nanoparticles and swimming microorganisms over a Riga plate subject to heat source/sink, Alexandria Engineering Journal 61 (2022) 2418–2429.

[58] W.K. Usafzai, **E.H. Aly**, A.S. Alshomrani, M. Zaka Ullah, Multiple solutions for nanofluids flow and heat transfer in porous medium with velocity slip and temperature jump, International Communications in Heat and Mass Transfer (2022) 105831.

[59] V. Puneeth, S. Manjunatha, M.S. Anwar, **E.H. Aly**, B.J. Gireesha, Impact of bioconvection on the free stream flow of pseudo–plastic nanofluid past a rotating cone, Heat Transfer 51 (2022) 4544-4561.

[60] **E.H. Aly**, U.S. Mahabaleshwar, T. Anusha, I. Pop, Exact solutions for wall jet flow of hybrid nanofluid, Jouurnal of Nanofluids 11 (2022) 373–382.

[61] U.S. Mahabaleshwar, **E.H. Aly**, A.B. Vishalakshi, MHD and thermal radiation flow of graphene Casson nanofluid over a stretching/shrinking sheet, Int. J. Appl. Comp. Math. 8 (2022) 113.

[62] **E.H. Aly**, U.S. Mahabaleshwar, W.K. Usafzai, T. Anusha, I. Pop, Wall jet flow and heat transfer of a hybrid nanofluid subject to suction/injection with thermal radiation, Thermal Science Engineering Progress 32 (2022) 101294.

[63] G.K. Ramesh, **E.H. Aly**, S.A. Shehzad, F.M. Abbasi, Bödewadt flow and heat transfer of hybrid Nanomaterial, International Journal of Ambient Energy, 43 (2022) 3228–3236.

[64] U.S. Mahabaleshwar, **E.H. Aly**, T. Anusha, MHD slip flow of a Casson hybrid nanofluid over a stretching/shrinking sheet with thermal radiation, Chinese Journal Physics, in press.

[65] G.K. Ramesh, J.K. Madhukesh, **E.H. Aly**, I. Pop, Modified Buongiorno's model for biomagnetic hybrid nanoliquid past a permeable moving thin needle, Int. J. Numer. Meth. Heat Fluid Flow, in press.

2- Conference Papers Published in Proceedings:

[**1**] **E.H. Aly**, L. Elliott, D.B. Ingham**,** 2D mixed convection over a vertical surface embedded in porous media under the boundary–layer approximation, 8th UK National Heat Transfer Conference, Oxford University, UK, 9-10 September 2003.

[**2**] A. Ebaid, A.S. Alofi, **E.H. Aly**, On Solving Singularly Perturbed Two-Point Boundary Value Problems, The Fifth Saudi Science Conference (SSC5'2012), Makkah 24–26/5/1433 H 16–18/4/ 2012.

3- Chapter in an International Book:

Authors: A. Ebaid, E.H. Aly
Chapter Title: Nonlinear Evolution Equations in View of Exp-Function Method and its Generalization
Chapter Number: One
Book Title: Advances in Mathematics Research
Editor: Professor Albert Baswell
Publisher: NOVA Science Publishers Inc., New York, USA
Volume/Year: 17 / 2012
URL: https://www.novapublishers.com/catalog/product_info.php?cPath=23_49&products_id=29683

4- Selected International Research Collaboration:

1. Prof. D. Ingham, Prof. J. Merkin (University of Leeds, **UK**)
2. Prof. I. Pop, Dr. A. Rosca (Universitatea Tehnica Cluj-Napoca, **Romania**)
3. Prof. E. Magyari (Swiss Federal Institute of Technology, **Switzerland**)
4. Prof. M. Guedda & Prof. A. Ouashine (Universite de Picardie Jules Verne, **France**)
5. Prof. R. Rach & Prof. K. Vajravelu (University of Central Florida, **USA**)
6. Dr. W. Usafzai (Nanjing Institute of Technology, **China**)
7. Profs. M. Abel (Gulbarga University, **India**) & U. Mahabaleshwar (Davangere University, **India**)
8. Dr S. Akram & Prof. S. Nadeem (National University of Sciences and Technology, **Pakistan**)
9. Prof. C. Chun (Sungkyunkwan University, Republic of **Korea**)
10. Prof. A. Ebaid (University of Tabuk, **KSA**) & Dr B. Alkahtani (King Saud University, **KSA**)
11. Prof. A. Kozae, Dr H.M. Sayed & Prof. M.A. Hassan (Ain Shams University, **Egypt**).

5- Reviewer for:

1. Promotion at Tabuk University (**KSA**).
2. Ph.D. at Visvesvaraya Technology University (**India**).
3. Manuscripts in many academic international journals.

(B) Supervising M.Sc.

Name	Thesis's title
Mr. Ameen Saleh Ali Al-Bareda	Problems on the Computational Fluid Dynamics and its Different Applications (First Supervisor: Prof. Nabil Eldabe – Education, Ain Shams Uni.) (7/2009 – 10/2011) Pass with **EXCELLENT**.
Mr. Hussien Abdallah Soliman	Some Problems on the Computational Mathematical Modelling (First Supervisor: Prof. Ahmed Younis – Education, Ain Shams Uni.) (7/2009 – 10/2011) Pass with **EXCELLENT**.
Mrs. Naglaa Fawzy Abdallah	On the Studying of Computational Bio-Mathematics (First Supervisor: Prof. Mohamed Fahmy– Education, Ain Shams Uni. (7/2009 – 6/2015) Pass with **EXCELLENT**.
Ms. Mona Hosny Abd Elkhalik	Rough Sets and its Applications in the Network (First Supervisor: Prof. Abdelomeen Kozae – Science, Tanta Uni.) (4/2009 – 4/2011) Pass with **EXCELLENT** and **NO CORRECTIONS**.
Mr. Amr Z. Mohamed	Rough Sets and its Different Applications (First Supervisor: Prof. Ali Kandil – Science, Helwan Uni.) (4/2009 – 4/2011) Pass with **EXCELLENT**.

Completed three final Bachelor of Engineering year projects at Loughborough and Leicester Universities entitled:

- Methods of Removing Land Mines.
- Reducing the Effect of Mobile Phone Signals on the Human Body.
- Rapid Product Development.

(C) Conferences & Workshops

1. 8th UK National Heat Transfer Conference, Oxford University, UK, 9–10/9/2003.
2. The Fifth Saudi Science Conference (SSC5'2012), Makkah, 16-18/4/2012.
3. Workshop on '*Nanotechnology-based renewable energy*' Center of Nanotechnology, King Abdulaziz University, 18–19/2/2012.
4. Workshop on '*International research cooperation*' King Abdulaziz University 4/3/2012.
5. Workshop on '*Configuration standards and requirements of the research groups*' King Abdulaziz University, 4/3/2012.

(D) Academic Funded Projects:

I have been awarded **thirteen** funded projects as follows:

- **Two** projects from University of Jeddah (UJ) as a principal investigator (PI), one is finished and closed and the other one has been submitted
- **Seven** projects from King Abdulaziz University (KAU) as a principal investigator (PI) with only one co-author each; Four of the Distinct Research Study and other three of the General Academic Program. All of these projects were finished and closed.
- **One** project from KAU research endowment fund (finished and closed).
- **Two** projects from University of Tabuk as a co-author (finished and closed).
- **One** project from Taibah University as a co-author (finished and closed).

Languages:

English (fluent), **French** (basics), **Arabic** (native speaker).

Development of Academic and Personal Skills

(A)   As a Trainer:

Trainer for three years (July 2008–August 2011) at *Center of the Development Capabilities of Faculty Members and Leaders* at Ain Shams University (more than **130** training day) in the following topics:

- Organization of the Scientific Conferences.
- Ethics of the Scientific Research.
- Communication Skills in Different Learning Styles.
- Effective Presentation Skills.
- Use of Technology in Teaching.

(B)   As a Trainee:

1. In the National Center for Faculty Development and Leadership, Egypt

4–2008: Pass the ' *Training of Trainers (TOT) Workshop* ' two levels:
    TOT1 (five full days) & **TOT2** (ten full days)
 7–2008: Pass *' Training of Trainers on the Developed Programs '* (three full days).

2. In King Abdulaziz University, **KSA**

  2–2012: Nanotechnology-based renewable energy (two days).
  3–2013: International research cooperation (one day).
 11–2013: Configuration standards and requirements of the research groups (one day).
  3–2014: Make use of the databases Thomson ISI (one day).

3. In Ain Shams University, **Egypt**

  6–2014: Strategic planning (three days).
  8–2009: Systems exams and student assessment (three days).
 12–2007: Effective teaching presentation skills (three days).
 12–2007: Research projects, local and global competitiveness (three days).
 10–2007: The use of technology in teaching (three days).
 10–2007: Communication skills in different learning styles (three days).
 10–2007: Scientific publishing (three days).
 10–2007: Ethics of scientific research (three days).
8/9–2000: University teacher preparation course (three weeks).

4. In Loughborough University, **UK**

  6–2007: Multidisciplinary research and teaching with MathWorks products (one full day).
  6–2007: Comprehensive interactive performance between scientific research and teaching.
  5–2007: Market yourself and your thoughts (one full day).
  2–2007: How to establish workshops in order to teach effectively (one full day).
  2–2007: Supervising graduation projects and master (one full day).
  1–2007: Supervise doctoral students (one full day).
 11–2003: Teaching skills for graduate students and researchers (one full day).
  6–2003: Keeping your research up to date (one full day).
5/6–2003: Writing up research (three days).

Teaching Experience

Selected of Teaching Experience:

1- In Egypt

Ain Shams University	1993-1994:	Teaching mathematics in the secondary schools.
	1995-2001:	Public and private tutorials and marking at applied and pure mathematics and computer science.
	1996:	Electromagnetic, undergraduate fourth year.
	1996-2000:	Calculus, general diploma, postgraduate lectures.
	1997:	Analytical Mechanics, undergraduate third year.
	1998:	Mechanics, undergraduate first year.
	2009:	Fluid Dynamic.
Banha University	2007:	Differential Equations.
The Higher Technological Institute	2009-2010:	Numerical Methods & Numerical Analysis. Differential and Integral Calculus II.
Misr International University	2010-2011:	Mathematics at Pharmacy Department. Mechanics at Engineering Department.

2- In Saudi Arabia

King Abdulaziz University & University of Jeddah	2011-Present:	• Differentiation and Integration (Calculus I). • Differentiation and Integration (Calculus II). • Differentiation and Integration (Calculus III). • Differential Equations I. • Differential Equations II. • Subjects in Applied Mathematics. • Subjects in Differential Equations. • Subjects in Analysis. • Training (Preparing the students for teaching). • Mathematical Transforms (Master Course)

3- In UK

Loughborough University	2004-2007:	Teaching Arabic language for the non-speakers.
Leeds University	2002-2003:	Demonstrating and Practical help: Introduction to MAPLE. Marking: Introduction to Applied Mathematics.
	2001-2002:	Marking: 1- Applications of Mathematics. 2- Calculus, ODEs and Several Variable Calculus. 3- Fundamentals of Particle Dynamics. 4- Further ODEs and Several Variable Calculus.
	2001-2002:	Mathematics for GCSE certificate, private tutorial.
De MontFort University	2004-2006:	BSc Engineering, private tutorials in mathematics, engineering and physics.

Biography

In 1994, Prof. Emad Aly graduated with first honors and excellent degrees from the Department of Mathematics, Ain Shams University (ASU) in Egypt. From the same university, he then obtained two degrees of a General and Specialized Diploma in Applied Mathematics with excellent degrees in both. As a result, he was top of the class of postgraduates (years: 1995-1996). In 1999, ASU honorably awarded Emad a M.Sc. in Heat and Mass Transfer. In 2003, Emad was rewarded three scholarships from King Faisal Foundation (KSA), Leeds University (UK) and Royal Society of London in order to continue his studies of the second M.Sc. in Computational Fluid Mechanics. From there, he obtained a Ph.D. studentship from Loughborough University (UK) in Applied Mathematics for Engineering, *Modelling the Behaviour of Cooling Tower*, and completed it in 2007. In the same year, Emad received a Postdoctoral Research Associate from Loughborough University in modeling for Chemical Engineering and successfully handled this project before the official deadline. Dr. Aly was recently given two full professorship promotions, one from the Supreme Council of Universities (Egypt) in 2019 and another by the Promotions Committee at University of Jeddah (Saudi Arabia) in 2020. Prof. Aly's main interests lie in the Mechanics of Nanofluids and their applications. He has worked and continues to work, in close collaboration with scientists from all over the world: India, China, UK, Romania, USA, France, Switzerland, Pakistan, KSA, and Egypt. In addition to his thirty years of teaching experience in most mathematical subjects across various universities, Prof. Aly also acts as a certified professional trainer for developing the capabilities of faculty members and leaders. He now works in ASU and UJ, supporting about 2000 students daily via MyLab Mastering at Pearson. Finally, reading in Human Resources is the preferred hobby for Prof. Aly.

Important Sites

ISSN Award: https://issnawards.com/amo-team/prof-emad-hassan-aly/
Google Scholar: https://scholar.google.com/citations?user=iuFBCq0AAAAJ&hl=en
ORCID: 0000-0001-7432-193X