

Research Group 3

Group Name	Elasticity and Fluid Mechanics
Academic Year	2021

Basic Information	
Department	Mathematics
Location	Sohag Univesity

Group Members				
No. of Prof.	No. of Ass. Prof.	No. of Lect.	No. of Ass. Lect. & Demonst.	
1	-	2	3	



كلية العلوم
Faculty of Science

حاصلة على شهادة الاعتماد من الهيئة القومية
لضمان جودة التعليم والاعتماد في 2012/7/12م



جامعة سوهاج
University of Sohag

Staff members

#	Name	Scientific degree	e-mail	Specializations	C.V
1	Abd-El-Mooty Mohammed Abd-Alla	Professor	mohmrr@yahoo.com	Fluid Mechanics	https://scholar.google.com/citations?user=f4iQR5UAAAAJ
2	Mostafa Abdullah Ahmed Abdel-Hafez	Lecturer	mostafa.abdallah@yahoo.com	Fluid Mechanics	https://scholar.google.com/citations?user=C7dQ4wgAAAAJ&hl=ar
3	Mahmoud Hassan Shehata	Lecturer		Fluid Mechanics	

Ass. Lecturers & Demonstrators

#	Name	Scientific degree	e-mail	Specializations	
4	Yasmine Elmhedy Ali	Instructor	yasmine.elmhedy@gmail.com	Fluid Mechanics	https://scholar.google.com/citations?hl=ar&user=cFbYjnkAAAAJ
5	Hassan ZainElaabi deen Khalifa	Instructor	hassanelsharfy180@gmail.com	Elasticity	https://scholar.google.com/citations?user=sfXUYPYAAAAJ&hl=ar
6	Nourhan Mokhtar Abdelrahman	Instructor	nourhanmokhtar@gmail.com	Fluid Mechanics	

Theses produced by the Lab			
M. Sc Thesis			
#	Name	Title	Approval date
1			
2			
Ph.D. Thesis			
#			
1	eabd almuneim muhamad eabd almuneim	Solutions to some problems in the theory of thermoelasticity using analytical or numerical methods.	30 /1/2019
2	Arabiy Atef Kilani	Solutions to some problems in the theory of thermoelasticity using analytical or numerical methods.	30 /1/2019

Articles produced by the Lab		
#	Title	Journal information
1	Peristaltic transport of a Jeffrey fluid under the effect of gravity field and rotation in an asymmetric channel with magnetic field	Multidiscipline Modeling in Materials and Structures, 2017, 13 (4), pp. 522-538.
2	Influence of magnetic field and heat and mass transfer on the peristaltic flow through a porous rotating medium with compliant walls	Multidiscipline Modeling in Materials and Structures, 2017,13 (4), pp. 648-663.
3	Numerical simulation of convective motion in an anisotropic porous medium and cosymmetry conservation	Computational Mathematics and Mathematical Physics, 2017, 57 (10), pp. 1706-1719.
4	Anisotropy effect on the convection of a heat-conducting fluid in a porous medium and cosymmetry of the Darcy problem	Fluid Dynamics, 2017, 52(1), pp 49-57
5	Propagation of a thermoelastic wave in a half-space of a homogeneous isotropic material subjected to the effect of gravity field	Archives of Civil and Mechanical Engineering, 2017, 17(3), pp 564-573
6	Plane vibrations in a transversely isotropic infinite hollow cylinder under effect of the rotation and magnetic field	Computer Modeling in Engineering & Sciences, 2017,113(2), pp 151-170
7	Eigenvalue approach to two dimensional coupled magneto-thermoelasticity in a rotating isotropic medium	Results in Physics,2017, 7, pp 2941-2949
8	Influence of magnetic field and heat and mass transfer on the peristaltic flow through a porous rotating medium with compliant walls	Multidiscipline Modeling in Materials and Structures, 2017, 13 (4)
9	A two-dimensional problem with rotation and magnetic field in the context of four	Results in Physics, 2017, Vol. 7, pp 2742-2751

	thermoelastic theories	
10	Thermal stresses in thermoelastic half-space without energy dissipation subjected to rotation and magnetic field	Applied Mathematics and Information Sciences, 2017, 11 (6), pp. 1637-1647.
11	Rotational effect on thermoelastic Stoneley, Love and Rayleigh waves in fibre-reinforced anisotropic general viscoelastic media of higher order	Computers, Materials and Continua, 2017, 61 (2), pp. 221-230
12	On an influence of thermal stresses and magnetic field in thermoelastic half-space without energy dissipation	Journal of Thermal Stresses, 2017, 40(3), pp 267-280
13	Effect of rotation and magnetic field on free vibrations in a spherical non-homogeneous embedded in an elastic medium	Results in Physics, <u>2018</u> , Vol. 9, pp 698-704
14	Effect of rotation and gravity on the reflection of P-waves from thermo-magneto-microstretch medium in the context of three phase lag model with initial stress	Microsystem Technologies ,2018 , 24(8), pp 3357–3369
15	Effect of rotation on the surface wave propagation in magneto-thermoelastic materials with voids	Journal of Ocean Engineering and Science, 2018, 3 (4), pp 334-342
16	Eigenvalue approach to coupled thermoelasticity in a rotating isotropic medium	Results in Physics, 2018, vol. 8, pp 7-15
17	Modeling of anisotropic convection for the binary fluid in porous medium	Computer Research and Modeling, 2018, 10 (6), pp. 801-816.
18	Anisotropic Problem of Darcy Convection: Family of Steady Flows and Its Disintegration during the Destruction of Cosymmetry	Fluid Dynamics, 2018, 53 (6)
19	Effects of rotation and gravity on an electro-	Applied Mathematics and Mechanics (English

	magneto-thermoelastic medium with diffusion and voids by using the lord-shulman and dual-phase-lag models	Edition), 2019, 40 (8), pp. 1135-1154.
20	On problem of the stresses in a non-homogeneous composite of an infinite cylinder of orthotropic material	Results in Applied Mathematics, 2019, Vol. 3, pp 100014
21	<i>Effect of a magnetic field on the propagation of waves in a homogeneous isotropic thermoelastic half-space</i>	Физическая мезомеханика ,2019, 22(1), pp 81-91
22	Solution of a problem of thermal stresses in a non-homogeneous thermoelastic infinite medium of isotropic material by finite difference method	Journal of Ocean Engineering and Science, 2019, 4(3), pp 256-262
23	A magneto – thermo-elastic problem for a half-space without energy dissipation subjected to rotation and gravity field	Journal of Ocean Engineering and Science, 2019 4(1), pp 55-63
24	Rayleigh surface wave propagation in an orthotropic rotating magneto-thermoelastic medium subjected to gravity and initial stress	Mechanics of Advanced Materials and Structures, 2020, 27 (16), pp. 1400-1411.
25	Effect of rotation on wave propagation through a poroelastic wet bone with cavity	Multidiscipline Modeling in Materials and Structures, 2019, 16(1), pp. 53-72
26	Electromagnetic field in fiber-reinforced micropolar thermoelastic medium using four models	Journal of Ocean Engineering and Science, 2020, 5(3) pp 230-248
27	. Effect of rotation on wave propagation through a poroelastic wet bone with cavity	Journal of Function Spaces, 2020, pp 8817877
28	Effect of several fields on a generalized thermoelastic medium with voids in the context of Lord-Shulman or dual-phase-lag models	Mechanics Based Design of Structures and Machines ,2020, pp 1-24
29	On generalized waves reflection in a micropolar thermodiffusion elastic half-space under initial stress and electromagnetic field	Mechanics Based Design of Structures and Machines, 2020, pp 1-18
30	Photothermal and void effect of a	Mechanics Based Design of Structures and

	semiconductor rotational medium based on Lord–Shulman theory	Machines, 2020, pp. 1-14
31	Reflection of plane waves on generalized thermoelastic medium under effect of temperaturedependent properties and initial stress with three-phase-lag model	Mechanics Based Design of Structures and Machines, 2020
32	Propagation of a thermoelastic wave in a half-space of a homogeneous isotropic material subjected to the effect of rotation and initial stress	Computers, Materials and Continua, 2020, 62 (2), pp. 551-567.
33	Homotopy perturbation method to a half-space in generalized thermoelastic for two models	Authorea Preprints, 2020,
34	Thermal stresses for a generalized magneto-thermoelasticity on non-homogeneous orthotropic continuum solid with a spherical cavity	International Journal Mechanics Based Design of Structures and Machines, 2020, pp 1539-7742
35	Effect of a Magnetic Field on the Propagation of Waves in a Homogeneous Isotropic Thermoelastic Half-Space	Physical Mesomechanics, 2020, 23(1), pp 54-64
36	Dual-phase-lag model on magneto-thermoelastic rotating medium with voids and diffusion under the effect of initial stress and gravity	Heat transfer, 2020, 49 (4), pp 2131-2166
37	Analytical solution for rotating surface waves remodeling in long bones under magnetic field	JP Journal of Heat and Mass Transfer, 2020, 20(1), pp1-30
38	Magneto-thermoelastic problem in the context of four theories under influence of laser pulse	archives of thermodynamics, 2020, 41(1), pp 31–66

	and gravity field	
39	Plane Waves Transmission and Reflection at the Interface Between Thermoelastic Continua in Absence of Dissipation: The Influence of Magnetic Field and Rotation	Developments and Novel Approaches in Biomechanics and Metamaterials, 2020 , vol. 132 ,pp 235-266,
40	Radial vibrations on an elastic medium subjected to rotation and magnetic field	Mechanics Based Design of Structures and Machines An International Journal, 2021,VOL. 49, PP 1-14
41	Electromagnetic field and three-phase lag in a compressed rotating isotropic homogeneous micropolar thermo-viscoelastic half-space	Mathematical Methods in the Applied Sciences, 2021, 44 (13), pp. 9944-9965
42	. Finite difference technique to solve a problem of generalized thermoelasticity on an annular cylinder under the effect of rotation	Numerical Methods for Partial Differential Equations, 2021, 37 (3), pp. 2634-2646.
43	New turbulence modeling for air/water stratified flow (vol 5, pg 55, 2019)	Journal of Ocean Engineering and Science,2021,6 (1), pp 106-106
44	Wave radiation by a horizontal circular cylinder submerged in deep water with ice-cover(vol 4, pg 49, 2018)	Journal of Ocean Engineering and Science, 2021, 6(1), pp 105-105
45	. Wave propagation model in a human long poroelastic bone under effect of magnetic field and rotation	Computers, Materials and Continua, 2021, 68 (2), pp. 1485-1504.
46	Rotational effect on the propagation of waves in a magneto-micropolar thermoelastic medium	Computers, Materials and Continua, 2021, 69 (1), pp. 205-220.
47	Effects of heat transfer and the endoscope on Jeffrey fluid peristaltic flow in tubes	Multidiscipline Modeling in Materials and Structures, 2021, 17 (5), pp. 895-914.
48	The effect of rotation on the free vibrations in a non-homogeneous orthotropic magneto-elastic	Mechanics Based Design of Structures and Machines, 2021

	hollow sphere	
49	Numerical solution of a problem of thermal stresses of a magnetothermoelastic cylinder with rotation by finite-difference method	Computers, Materials and Continua, 2021, 68 (3), pp. 3339-3352.
50	Effect of magnetic field and voids on Rayleigh waves in a nonlocal thermoelastic half-space	Journal of Strain Analysis for Engineering Design, 2021, pp 03093247211001243
51	Effect of a magnetic field and initial stress on the P-waves in a photothermal semiconducting medium with an internal heat source	Mechanics Based Design of Structures and Machines, 2021, pp 1-20
52	Effect of magnetic field and three-phase-lag in a rotating micropolar thermo-viscoelastic half-space homogeneous isotropic material	Waves in Random and Complex Media, 2021, 31(3), pp 435-458
53	Invariant subspaces, exact solutions and stability analysis of nonlinear water wave equations (vol 5, pg 35, 2019)	Journal of Ocean Engineering and Science, 2021, 6 (1), pp 104-104
54	Time-dependent viscous flow of higher-order reactive MHD Maxwell nanofluid with Joule heating in a porous regime	Waves in Random and Complex Media, 2021, pp 1-21
55	MHD Mixed Convection Nanofluid Flow over Convectively Heated Nonlinear due to an Extending Surface with Soret Effect	Complexity, 2021
56	Effect of Heat and Mass Transfer and Magnetic Field on Peristaltic Flow of a Fractional Maxwell Fluid in a Tube	Complexity 2021,
57	Thermoelastic medium in the context of four theories subjected to gravity field and laser pulse	Waves in Random and Complex Media, 2021, vol. 31, pp 1-22
58	Initial Stress and Gravity on P-Wave Reflection from Electromagneto-Thermo-Microstretch	Complexity , 2021,

	Medium in the Context of Three-Phase Lag Model	
59	The influence of heterogeneity and initial stress on the propagation of Love-type wave in a transversely isotropic layer subjected to rotation	Science Progress, 2021,104(3),
60	MHD Casson nanofluid flow over nonlinearly heated porous medium in presence of extending surface effect with suction/injection	Indian Journal of Physics, 2021,vol. 95,pp 1-15