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LANGUAGE AND SPEECH: WITH SPECIAL REFERENCE TO J. L. AUSTIN'S THEORY OF SPEECH ACTS.

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Abstract

In this paper, I have, first, sketched the relation between language and speech and then stated and explained J.L. Austin's theory of speech acts. This paper is a statement and evaluation of the English Philosopher J.L. Austin's theory of speech acts, presented in his post-humously published book, How to Do Things with Words. The theory of speech acts questions the traditional picture of language as true or false descriptions of facts or states of affairs in the world. Austin points out that there are sentences which are not statements but the logical functions of which are the performances of certain acts. This led Austin to make a distinction between performatives and constatives. But Austin became dissatisfied with this initial distinction and opted for a more general theory of speech acts which subsumes the performative-constative distinction, the performatives being speech acts as are constatives. The speech acts, according to Austin are context and convention dependent. There exist conventions by means of which the utterance of a certain sort ensures that a certain speech act is performed. However, the role of conventions in speech acts is criticized by P.F. Strawson, who emphasized on the intentional factor. An attempt is made to defend Austin against this criticism. The theory of speech acts shifts our attention from the descriptive to the communicative function of language and belongs to the domain of pragmatics so far as its context and convention bound nature is concerned.

Key words: language, speech, performatives, speech acts, convention, intention, communication.

Introduction: In this paper, the introduction of the theory of speech acts, as conceived by Austin, is prefaced by the distinction, made between language and speech, by the Swiss linguist, Ferdinand de Saussure and the British philosopher, Gilbert Ryle, to be of relevance for understanding Austin's theory. To our mind, the account of speech as the use of language does have connection with Austin's theory. We have also touched upon the distinction that Austin draws between performative and constative distinction, to be subsequently annulled by him in favour of a general theory of speech acts. Strawson's criticism of the conventionality of speech acts is discussed along with some more sympathetic reading of Austin's account of conventions.

Language is distinguished as an abstract system of symbols, and the rules for their meaningful combination, i.e., the grammar of the language. Speech, on the other hand, can be used to cover the activities or a clan of activities involved in using language to say things. Speaking is an activity of saying things by using language.

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As a prelude to the discussion of Austin's speech act theory, I intend to state two theories of the relation between language and speech, which I believe to have significance for the study of speech acts. I begin with Ferdinand de Sassure, the Swiss linguist and philosopher. Although, Sassurehas made a three-fold distinction between *Laparole* (speaking), *Lelangue* (speech) and *La Langue* (language)[1] and

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On the Relationship between Language and Culture and some Observation in Partition

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ABSTRACT : This paper primarily focusses on an intimate relationship between language and culture. Both are the intimate parts of a civilization of a nation. The culture of a civilization is manifested through language. First, I shall state what the language and culture are. Afterwards, an account will be given about how these two are related with each other. Language is defined is an abstract system of symbols and the rules of their combination. Etymologically speaking, the word lingua, a Latin word, meaning 'tongue' which is the most important one of the vocal organs involved in articulation, becomes langue in French and then 'language' in English. Nobody can deny the fact that language is the most powerful means of communication among human beings. One prominent view is that language reflects reality; language is a mirror of reality. Language is a means of cultural transmission. Every language has its rules for combining the words to have larger units and full sentences. It is difficult to define culture because it has a very wide-spread range and it is related with various aspects of human life. The concept of culture first emerged in eighteenth and nineteenth century in Europe. It then connoted a process of cultivation or improvement, in agriculture or horticulture. The term "culture" is by no means self- evident. The word "culture" derives from the Latin word 'cultura', stemming from 'colere' which mean 'to cultivate'.However, the word "culture" is most

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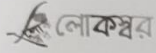
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It is to be noted that your paper will be published in the Reer Reviewed Research Journal 'LOKOSWAR'. Deshvag special Issue, May,2022.Yours sincerely

Date ; 18.05.2022

Sukanta Mukhapadhaya

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स्वस्थसमाजनिर्माणे श्रीरामकृष्णोपदिष्टसंहतिसमन्वचिन्तनम्

प्रबन्धकर्ता - कार्तिकमेटे

भूमिका

धर्मक्षेत्रं भारतवर्षम् अवतारसूरिति प्रसिद्धम्। अत्रैव पवित्रभूमौ धर्मप्रतिपालनाय लोकशिक्षायै च रामरामकृष्णाद्यः जन्म जगृभुः। पश्चिमवङ्गस्य हुगली्मण्डले कामारपुकुरनामकेये ग्रामे १८३६ ईश्वीयाब्दे फ्रबवरीमासस्य अष्टादशे अह्नि श्रीरामकृष्णस्य जन्माभवत्। बाल्यादेव आध्यात्मिकसाधने प्रबलासक्तिरासीदस्य। युगव्यापिनि साधनजीवने श्रीरामकृष्णेन तन्त्रमधुरभाववेदान्तादितत्त्वमधिगम्य सिद्धिराप्ता। धर्मोपदेशेन अयं महापुरुषः गृहिन्यासिनः सर्वान् प्रति कारुण्यं प्रदर्च्च प्रभृत् लोककल्याणं साधितम्। एवं कोऽयं धर्म इति जिज्ञासायां धर्मशास्त्रं अयमर्थः उपलभ्यते - 'घृ'-धारणपोषणः इत्यस्मात् धातोः 'मन' प्रत्यये कृते धर्मशब्दः निष्पद्यते। अनेन शब्देन कर्तव्यं पालनं धारणं चेत्यादि बहवः अर्थाः अववुध्यन्ते। न तु धर्मशब्देन आङ्ग्लभाषायां Religion इति अर्थः बोद्धव्यः। यतो हि अयं शब्दः सम्मदायविशेषं बोधयति न तु कर्तव्याकर्तव्यविषयम्। यथा हिन्दुधर्मः, मुस्लिम्धर्मः, ख्रीष्टधर्मः इत्यादि। वस्तुतः अयं धर्मः सर्वेषां कर्तव्यविषेशं बोधयति यथा छात्राणां अध्ययनं धर्मः, पालनं यथा पृथिव्याः परिपालनं धर्मः, जलस्य निम्नगामित्वं धर्मः इत्यादि। तस्यैव धर्मस्य प्रतिपादकं यत् शास्त्रं तत् धर्मशास्त्रम्। धर्मशास्त्रे धर्मविषये अनेके अर्थाः प्रोच्यन्ते यथा- ध्रियते लोकोऽनेन इति धर्मः। धर्मशब्दस्य तादृशः अगाधः अर्थः अस्ति यस्य शब्दस्य अनुवादम् अन्यभाषासु कर्तुमपि न शक्नोति। सर्वं धर्मे प्रतिष्ठितम् धर्मो रक्षति रक्षितः इत्युच्यते। 'धारणाद्धर्ममित्याहुः धर्मो धारयते प्रजाः'इति महाभारते कथ्यते। धर्मस्य अनेकानि लक्षणानि वर्णितानि मनुस्मृतौ। धर्मे नाम विशिष्टा जीवनयापनपद्धतिः। धर्मस्याचरणं न सरलं तथापि करणीयम्। धर्माचरणात् एव मानवः अन्येभ्यः पशुभ्यः भिन्नः भवति। यतो धर्मस्ततो जयः इति शास्त्रे वर्णितम्॥

महामुनिः मनुः मनुस्मृतौ उक्तवान् – धृतिः क्षमा दमोऽस्तेयं शौचमिन्द्रियनिग्रहः। धीर्विद्या सत्यमक्रोधो दशकं धर्मलक्षणम् इति।

एवं धर्ममार्गेण उपदेशं कृत्वा अवतारपुरुषेण श्रीरामकृष्णेन जगतः महोपकारः साधितः। अद्यत्वेऽपि स उपदेशः अस्मान् भूयः सन्मार्गं निर्दिशन् अस्ति। तेषु उपदेशेषु संहतिसमन्वयाख्यं विषयं प्रबन्धेऽस्मिन् आलोचयितुमुत्सहे।

विमर्शः

जीवनमस्माकं रहस्यजालेन परिपूर्णमस्ति। रहस्यमिदं संहत्या संयोजितम्। संहतौ न हिविरोधस्य अस्वीकारः क्रियते, तस्य अतिक्रमणाच प्रशमनाय निरोधाय वा यत्नः विधीयते। वैचित्र्यस्य उपेक्षात्र न क्रियते अपि तु वैचित्रे ऐक्यभूमिः आविक्रियते। कारणं हि विरोधविचित्र्यप्रभृतिविषयः प्रकृतिपरिकल्पनायाः प्रधानमङ्गम्। श्रीरामकृष्णस्य समग्रेऽपि जीवने अयं संहतिध्वनिरेव प्रतिध्वन्यते। तस्य अमृतवाण्याम् विद्यते अस्माकं परिवारे, समाजे, जातीयजीवने, आन्तर्जातिकजीवने च संहतिप्रतिष्ठायाः निरन्तरम् आह्वानम्।

ORIGINAL ARTICLE

Pulsatile flow of blood with shear-dependent viscosity through a flexible stenosed artery in the presence of body acceleration

Subrata Mukhopadhyay[1] · Mani Shankar Mandal[2] · Swati Mukhopadhyay[3]

Abstract

A mathematical model of physiological pulsatile flow of blood through a stenotic flexible artery in the presence of body acceleration is presented in this paper. Streaming blood is considered as a shear-thinning non-Newtonian fluid as proposed by Yeleswarapu (Evaluation of continuum models for characterizing the constitutive behaviour of blood, Ph.D. thesis, Dept. Mech. Eng., University of Pittsburgh, 1996), and a physiological pulsatile flow rate proposed by Pedrizzetti (J Fluid Mech 310:89–111, 1996) has been taken through the tube. Deformation of vessel wall is modelled as a function of flow rate. This computational study of an idealized model may bring some insights for realistic blood flow through a stenotic artery. The novelty of this work lies in the fact that realistic flow of blood through a stenosed artery has been studied as far as possible and a new idea has been provided to describe the arterial wall motion. Governing equations in cylindrical polar coordinates are solved using stream function–vorticity method. Behaviour of various flow quantities is investigated through a parametric study. It is noted that the degree of constriction and body acceleration have important impacts on the haemodynamic parameters such as wall shear stress, oscillatory shear index, and relative residence time. Increasing body acceleration enhances the peak value of wall shear stress, but reduces the oscillatory shear index and relative residence time. Almost 1/4th increase in length of flow separation is found when Froude number raises its value from 0.1 to 0.5, other parametric values remaining fixed. On the other hand, almost 50% increase in the magnitude of the peak value of wall pressure is found when the amplitude of body acceleration takes a value 0.4 ($A = 0.4$) compared to the without body acceleration case ($A = 0$). These results have a significant role.

1 Introduction

Studies related to flow of blood through stenotic arteries have drawn noteworthy attention to researchers during the last few decades, as the commencement and progress of many cardiovascular diseases which direct to the malfunction of the cardiovascular system are intimately associated with the haemodynamics of such an artery. Atherosclerosis or arterial stenosis commences through alteration in

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endothelial cell utility that encourages white blood cells to attach to the endothelium instead of flowing through the blood usually and the endothelium turns out to be damaged thereby. This permits blood cells and deadly substances, such as lipids, low density lipoproteins and triglycerides, present in the blood to go by the endothelium and mount up in this area. Different compound phenomena take place in the course of time and lastly calcium builds up over the wound site to shape a material similar to bone.

The formation of arterial stenosis reduces the supply of blood to the distal bed through that artery. With the spread of atherosclerotic plaque, if it becomes unstable, it ruptures and exposes its contents to streaming blood. Platelets may then build up around the ruptured plaque and result in blood coagulation which occludes the artery. When blood flowing through an artery is severely compromised by a blood clot, the cells of the tissues that depend on the blood flow from that artery become injured or die. Coronary atherosclerosis

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prevents the supply of blood by occluding the arteries which prevents oxygen supply to the heart and thus causes heart attack. Atherosclerotic processes may also cut off the oxygen supply to a portion of the brain resulting in an ischaemic stroke [1, 2].

expressed in terms of a single cosine function. Thus, there is a gap in open literature regarding the effects of body acceleration on blood flows through a stenosed flexible artery subject to physiologically realistic pulsatile flow condition.

To fill this gap, a mathematical model is developed in

Heat transfer in pulsatile blood flow obeying Cross viscosity model through an artery with aneurysm

Subrata Mukhopadhyay · Mani Shankar Mandal◉ · Swati Mukhopadhyay

Abstract A mathematical model has been developed to represent heat transfer in pulsatile blood flow through an artery having an aneurysm in its lumen occurring from different types of anomalous enlargement. Time-variant wall geometry has been considered and the streaming blood is taken as a non-Newtonian fluid obeying Cross viscosity model. With the help of stream function–vorticity method, a finite difference scheme is used to solve the governing equations along with the suitable initial and boundary conditions in order to find out the physiologically noteworthy parameters up to the required degree of precision. Particular importance has accordingly been paid in comparing the current numerical results with the existing ones, and an excellent conformity between these two has been attained. For additional qualitative insight into the flow and heat transfer, effects of severity of aneurysm and different hemodynamic parameters on axial velocity, wall shear stress, and heat transfer rate are presented through graphical representations and analyzed in detail.

Keywords Aneurysm · Blood flow · Cross viscosity model · Heat transfer · Stream function–vorticity method

1 Introduction

From the theoretical, experimental, and clinical perspectives, blood flow through a diseased artery is an attractive field of research. Unusual expansion in the arterial wall is supposed by many researchers to play a major role in the formation of a disease, a leading cause of mortality in the present world. Several mathematical models have been constructed to explain the capacity to understand the accessible treatment. Weakening of vessel wall in certain locations forms a blood-filled balloon-like dilatation known as an aneurysm. Normal flow of blood through arteries thus becomes perturbed and complicated. Rhythmic flow of blood inside an aneurysm worsens the structure, and rupture may happen ultimately. The most common sites of aneurysm are the arteries such as cerebral, carotid,

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abdominal, and renal. An aneurysm grows gradually with time and grows faster as it becomes larger. A large-sized aneurysm has a significant risk of rupture. Severe internal hemorrhage, other complications, and in the worst situation death for up to 90% of victims may occur due to burst of an aneurysm. Bulge diameter is generally referred as a primary indicator of risk, e.g., when the diameter of an abdominal aortic aneurysm (AAA) exceeds 55 mm

ORIGINAL ARTICLE

HEAT TRANSFER WILEY

The flow of MHD Maxwell liquid over an extending surface with variable free stream temperature

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Abstract

The aim of this article is to investigate the steady two-dimensional flow of a magnetohydrodynamics Maxwell liquid over a stretched exterior having prescribed exterior hotness in the presence of changeable free stream temperature. Here the Maxwell liquid replica reflects non-Newtonian liquid behavior. By means of similarity alterations, the leading differential equations which are partial in nature are altered to differential equations that are ordinary in nature and subsequently numerical solutions are received via a shooting scheme. The motion and heat transport characteristics for the leading parameters is scrutinized and talked about elaborately using their graphical demonstration. It is established that the liquid speed reduces with escalating magnetic parameter. The consequences of growing Maxwell parameter are to hold back the speed of liquid. An increment in heat movement speed has been observed for enhancing the temperature ratio and Maxwell parameters.

KEYWORDS
boundary layer, Maxwell fluid, MHD, non-Newtonian fluid, shooting method, stretching surface, variable free stream temperature

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Cu–water nanofluid flow with arbitrarily shaped nanoparticles over a porous plate in a porous medium in the presence of slip

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Abstract. The objective of the article is to analyse the forced convection nanofluid flow over a permeable plate in an absorbent medium using slip boundary conditions. A single-phase model for the nanofluid is used with variable shapes of nanoparticles. The partial differential equations (PDEs) of the model are altered into a set of non-linear ordinary differential equations (ODEs) by a suitable alteration. To obtain the solutions of the system of equations numerically, Runge–Kutta method is used with a shooting technique. The effects of various parameters, like permeability, suction/injection, nanoparticle volume fraction, velocity slip, thermal slip and nanoparticle shape parameters on velocity and temperature profiles are presented graphically and analysed. In addition, for a clear understanding of the model, the flow and the heat transfer characteristics are presented through graphs and analysed. Fluid velocity is found to augment with the increasing values of permeability of the porous medium, whereas temperature is found to reduce in this case. Temperature is a rising function of the thermal slip parameter, whereas it is a decreasing function of the velocity slip parameter.

Keywords. Nanofluid; forced convection; porous medium; arbitrarily shaped nanoparticles; partial slips; permeable plate.

1. Introduction

Nanotechnology has attracted enormous attention among researchers due to its widespread applications in manufacturing processes and medical sciences. Nanofluid is an innovative class of fluids, the concept for which has been planned as a foundation for increased performance of heat transport fluids. To augment the thermal conductivity of the base fluid (viz., water, ethylene glycol, oil), which has low thermal conductivity, nanometre-sized elements are scattered in the base liquid. To permit more heat transfer, usually, these elements are prepared of metal or metal oxide to supplement the conduction and convection coefficients. Choi [1] was the first to understand that the accumulation of nanoparticles in the foundation liquid tremendously augments the thermal conductivity of the liquid. Buongiorno [2] first studied the convective heat transfer in nanofluids by observing the augmentation in thermal conductivity owing to Brownian movement and thermophoretic dispersion of nanoparticles. Later, Tiwari and Das [3] initiated a novel replica that is well accepted nowadays.

Mustafa *et al* [4], Nadeem *et al* [5, 6], Hussain *et al* [7], Das *et al* [8], Mabood *et al* [9], Hayat *et al* [10] and many others have investigated various aspects of nanofluid flow and heat transfer.

All these researchers considered no-slip conditions at the boundary. However, the no-slip condition at the boundary is unsuitable in situations where the exterior is sufficiently glossy. Partial slip speed is usually present on the border for emulsions, suspensions, foams, polymer solutions etc. Slip velocity at the boundary also occurs in a variety of situations, particularly in perforated plates and nets finished by wires, greased or chemically indulgenced hydrophobic surfaces, rough or porous surfaces (Hafidzuddin *et al* [11]), and amazing hydrophobic nanosurfaces (Choi and Kim [12], Hafidzuddin *et al* [11]). Applications of slip at the boundary are used in simulated heart valves, compound fluid problems and fluid flow on many interfaces. Hayat *et al* [13] managed to find an analytical solution. They found the influences of slip on the flow of a second-grade liquid over an extended surface in an absorbent medium. Heat transfer performance of a boundary layer flow over

Mani Shankar Mandal

Unsteady stagnation-point flow of CNTs suspended nanofluid on a shrinking/expanding sheet with partial slip: multiple solutions and stability analysis

Description   The purpose of the study of single/multi-wall carbon nanotubes (SWCNTs/MWCNTs) mixed water-based nanofluid having unsteady stagnation-point flow on shrinking/expanding sheet with velocity and thermal slip effects is to decode the heat transfer mechanism to know the high cooling rate criteria. Governing boundary layer coupled partial differential equation (PDEs) are converted into ordinary ones. The transformed equations are numerically solved by shooting method with RK-4 scheme. The impacts of different parameters are described graphically and a comparison between current and previous results is made in tabular form. Existence of multiple solutions along with unique solution appears for specific cases of shrinking and expanding velocities. The investigation also reveals that SWCNT-nanoparticles have more dominating heat and momentum transfer rates than MWCNT-nanoparticles. Velocity slip ...

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Buoyancy driven non-Newtonian Prandtl-Eyring nanofluid flow in Darcy-Forchheimer porous medium over inclined non-linear expanding sheet with double stratification

Authors Ajeet Kumar Verma, Krishnendu Bhattacharyya, Sohita Rajput, Mani Shankar Mandal, Ali J Chamkha, Dhananjay Yadav

Description In the existence of mixed convection and double stratification, the 2D, viscous, incompressible, steady, laminar boundary layer flow of Prandtl-Eyring nanofluid over the inclined non-linear expanding sheet in Darcy-Forchheimer porous medium is scrutinized. To analyze the impacts of Brownian motion and thermophoretic force on diffusion of nanoparticles Buongiorno model has been utilized. Flow governing equations are non-linear, higher order, coupled PDEs with no slip boundary condition, which are transforming into coupled, non-linear, higher order ODEs via suitable transformations. Obtained ODEs are solved using MATLAB bvp4c function. The impacts of flow governing parameters on flow associated distributions are acknowledged through graphs. In limiting sense, to check the credibility of numerical method, present results are compared with previously published data. The analysis reveals that fluid velocity displays an ...

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HYPERSINGULAR INTEGRAL EQUATION FORMULATION OF THE PROBLEM OF WATER WAVE SCATTERING BY A CIRCULAR ARC SHAPED IMPERMEABLE BARRIER SUBMERGED IN WATER OF FINITE DEPTH

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Summary

In this article, we study the problem of scattering of water waves by a thin impermeable circular arc shaped barrier submerged in ocean of finite depth under the assumption of linearised theory of water waves. The problem is formulated in terms of a hypersingular integral equation of an unknown function representing the difference of potential function across the curved barrier. The hypersingular integral equation is then solved by using two numerical methods. The first method is BEM where the domain and range of integral equation are discretised into small line segments and the unknown function satisfying the integral equation is assumed to be constant in each small subinterval. This reduces the integral equations to a system of algebraic equations which is then solved to obtain the unknown function in each sub-interval. The second method is collocation method where the unknown function is expanded in terms of Chebyshev polynomials of second kind. Choosing the collocation points suitably, the integral equation is reduced to a system of algebraic equations which is then solved to obtain the unknown function satisfying the hypersingular integral equation. The physical quantities of interest viz, the reflection coefficient, transmission coefficients, which are expressed in terms of the solution of the hypersingular integral equation, are computed by both the methods. The comparison of the reflection coefficient by the two methods shows reasonably good agreement. The reflection coefficient is depicted graphically against the wave number. The graphical results show that the size, position of the barrier and the depth of the water region has some effect on the reflected and transmitted wave.

1. Introduction

Hypersingular integral equations are a powerful mathematical tool whose solution plays a crucial role in solving boundary value problems arising in wave propagation problems. Parsons and Martin (cf. (**1**)) first initiated the hypersingular integral equation formulation of the problem of scattering of

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