

## SHORT CURRICULUM VITA



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- الوظيفة : نائب رئيس جامعة طنطا لشئون خدمة المجتمع وتنمية البيئة  
- جهة العمل : جامعة طنطا.  
- تاريخ الميلاد : 1958/12/25  
- محل الميلاد : بيلا - كفر الشيخ  
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- التخصص العلمي : الهندسة الإنشائية.  
- التخصص الدقيق : المنشآت المعدنية والمنشآت المركبة ( الخرسانية والمعدنية ).  
- المدرسة العلمية : فى مجال المنشآت المركبة - المنشآت المعدنية - إتران المنشآت.  
- أشرف على 64 بحث ومؤلف علمى و 26 رسالة ماجستير ودكتوراه.

### I. PERSONAL INFORMATION

**SURNAME** : DABAON  
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**DATE AND PLACE OF BIRTH** : 25-12-1958, BILA, KA FER EL-SHEIKH, EGYPT  
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### II.ACADEMIC HISTORY:

1. BACHELOR OF ENGINEERING SCIENCE (CIVIL DEPT). FACULTY OF ENG., MANSOURA UNIVERSITY, MAY 1981.
2. POSTGRADUATE COURSES FOR MASTER OF SCIENCE, FACULTY OF ENG. MINA UNIVERSITY, 1985.
3. MASTER OF SCIENCE IN STRUCTURAL ENGINEERING, FACULTY OF ENG. MINA UNIVERSITY, APRIL 1988.
4. POSTGRADUATE STUDIES IN CIVIL ENGINEERING, (AGfE), HANNOVER UNIVERSITY, GERMANY, SEPT.1989.
5. DOCTOR OF SCIENCE TECHNOLOGY WITH HONOURS IN STRUCTURAL ENGINEERING, INNSBRUCK UNIVERSITY, AUSTRIA, JULY 1993.
6. CHAIRMAN OF HEAVY STRUCTURES LAB. OF STRUCTURAL DEPARTMENT; 1998-2005.
7. CHAIRMAN OF RESEARCH AND CONSULTANCY CENTER OF FACULTY OF ENGINEERING; 2004-2006.
8. ASSOCIATE PROF. OCT. 1998.
9. PROFESSOR OF STRUCTURES AND STEEL BRIDGES, NOV.2003, STRUCTURAL ENGINEERING DEPT.
10. VICE DEAN FOR ENVIRONMENT AND COMMUNITY AFFAIRS; MAY 2005-FEB. 2010.
11. IN CHAIR OF DEAN OF THE FACULTY OF ENG. DEC 2009 - FEB. 2010.
12. VICE PRESIDENT OF TANTA UNIVERSITY FOR ENVIRONMENT AND COMMUNITY AFFAIRS; FEB 2010-PRESENT.
13. MEMBER OF THE EGYPTIAN BRANCH COMMITTEE FOR THE CODE OF PRACTICE FOR STEEL AND COMPOSITE BRIDGES.
14. MEMBER OF THE SCIENTIFIC COMMITTEE FOR THE PROMOTION OF THE PROFESSORS AND ASSOCIATE PROFESSORS.
15. MEMBER OF OTHER DIFFERENT COMMITTEE IN THE UNIVERSITY AND IN THE COMMUNITY.

### III. PRIZES:

- HOLDER OF THE "STAHLBAU VERBAND PRIZE", AUSTRIA, 1994.
- HOLDER OF THE "STATE PRIZE OF ENGINEERING SCIENCES", EGYPT, 2002.
- HOLDER OF THE "ALSHROUK FOR ORIGINALITY OF ENGINEERING SCIENCE AND TECHNOLOGY PRIZE", EGYPT, 2005.
- DESIGN AND SUBMITTED ON BEHALF OF TANTA GAVARNORATE TO ARADO HOLDING THE "SECOND BEST ENVIRONMENTAL MANAGEMENT ORGINAISATION FOR SOLID WASTES", 2008.
- NUMBER OF PRIZES FOR INTERNATIONAL PUBLICATIONS.

### IV. PUBLICATIONS:

- 64 NATIONAL AND INTERNATIONAL PUBLICATIONES UP TO DEC. 2015.
- MAIN SUPERVISOR FOR 26 PHD AND MSC DGREES UP TO DEC. 2015.
- EXTERNAL EXAMINAR FOR 39 THESISES OF PHD AND MSC. UP TO DEC.2015.

### - خبرات وظيفية أخرى:

- 1 - نائب رئيس جامعة طنطا لشئون خدمة المجتمع وتنمية البيئة في الفترة من 2010/2/7 وحتى تاريخه.
- 2 - قائم بعمل عميد الكلية 2009/12/17 حتى 2010/2/7.
- 3 - وكيل كلية الهندسة لشئون خدمة المجتمع وتنمية البيئة مايو 2006 - 2010.
- 4 - رئيس مجلس قسم 2008/9/9 حتى 2010/2/6.
- 5 - مشرف معمل الخرسانة المسلحة والمنشآت الثقيله 1998-2005 .
- 6 - مدير مركز البحوث والإستشارات الهندسية كلية الهندسة - جامعة طنطا 2004-2006.
- 7 - إستشارى تصميم المنشآت الخرسانية المسلحة 1997.
- 8 - إستشارى لمحافظة الغربية فى تصميم والإشراف على منظومة التخلص الآمن من المخلفات الصلبة على مسطح 143 فدان بمدينة السادات وأعمال هندسية متعددة أخرى.
- 9 - إستشارى هيئة الأبنية التعليمية فبراير 2006 - فبراير 2010.
- 10 - إستشارى المجمع المصرية لتأمين المسئولة المدنية عن أخطار أعمال البناء بقرار من وزير الإستثمار سبتمبر 2006 حتى 2010/2/6.
- 11 - عضو الهيئة الدولة للكبارى والمنشآت الهندسية 2000-2001.
- 12 - عضو اللجنة الفرعية لكود المصري ( الكبارى المعدنية والمركبة والمتحركة) 2008 حتى تاريخه.
- 13 - رئيس لجنة السلامة والصحة المهنية وحماية بيئة العمل بجامعة طنطا حتى تاريخه.
- 14 - نائب رئيس مجلس إدارة مركز البحوث والإستشارات الهندسية بكلية الهندسة مايو 2006 - فبراير 2010.
- 15 - نائب رئيس مجلس إدارة وحدة الورش الإنتاجية والصيانة ديسمبر 2007 - فبراير 2010.
- 16 - رئيس مجلس شئون خدمة المجتمع وتنمية البيئة .
- 17 - المشرف العام على الوحدات ذات الطابع الخاص .
- 18 - المشرف على مطبعة الجامعة .
- 19 - عضو اللجنة العليا والمشرف العام לנוادى تكنولوجيا المعلومات بطنطا .
- 20 - عضو مجلس إدارة توجيه المنتسبين .
- 21 - عضو مجلس إدارة صندوق التأمين الخاص للسادة أع ضاء هيئة التدريس والعاملين
- 22 - عضو مجلس إدارة صندوق الرعاية الصحية للعاملين .
- 23 - عضو اللجنة العليا للإشراف على المستشفى التعليمى الجديد حتى 2012.
- 24 - عضو المجلس الأعلى لشئون خدمة المجتمع وتنمية البيئة بالمجلس الأعلى للجامعات
- 25 - عضو مجلس إدارة وحدة الجودة والإعتماد بكلية الهندسة 2007 - فبراير 2010.
- 26 - عضو لجنة المنشآت الجامعية بجامعة طنطا 2008 وحتى تاريخه.
- 27 - عضو لجنة التحكيم لترقية الأساتذة والأساتذة المساعدين 2008 حتى تاريخه.
- 28 - عضو لجنة الترقية الدورة 11 فى يناير 2013 حتى ديسمبر 2015.
- 29 - نائب رئيس وحدة التخطيط الإستراتيجى حتى تاريخه.
- 30 - عضو لجنة تعديل قانون التعليم العالى فى مجال خدمة المجتمع المشكلة بالقرار (680) بتاريخ 2014/2/6.
- 31 - عضو لجنة التنمية البشرية وتطوير الجهاز الحكومى بمحافظة الغربية 2015/8/9 حتى تاريخه.

### - الجوائز:

- حاصل على جائزة رابطة المنشآت المعدنية النمساوية - النمسا 1994.
- حاصل على جائزة الدولة التشجيعية فى العلوم الهندسية - مصر 2002.
- حاصل على جائزة أكاديمية الشروق للإبداع العلمى والتكنولوجى - مصر 2005.
- الحصول لمحافظة الغربية على الجائزة الثانية لأحسن إدارة ببنية لمنظومة التخلص الآمن من المخلفات الصلبة ( من جامعة الدول العربية ) ( أرادو 2008).

No	Title	Authors	Bulletin / Conf. and Date of publishing	Abstract
1	"Postbuckling Behavior of Rectangular Plates under Combined Loading".	M.A. Dabaon.	M.Sc., Minia University, April 1988.	<p>The result of a theoretical study of the buckling of rectangular plates under combined shear and compression edge loading are presented. The out – of-plane support conditions of the plate were chosen to meet the edge conditions for a plate element in a large stiffened panel with stiffeners which can prevent deflections at the stiffened plate junction, but allow plate rotation an the unloaded edges are maintained straight but move bodily in the plane of the plate. Galerkin method is used to solve the von karman large elastic deflection equations using a two mode approximation which proved to be sufficient for the investigation of the plate post buckling behavior. The non-linear equations are solved numerically using a computer program designed, specially to facilitate the development of the stresses distribution within any section of the plate. Also, a prediction of the maximum plate carrying capacity is achieved taking into account the plate initial imperfections. The results are presented in charts suitable for design recommendations for wide range of geometrical arrangements, load combinations and levels of initial imperfection. Finally, a design procedure is proposed according to the theoretical findings and numerical examples are design codes wherever possible.</p>
2	"Postbuckling Stresses of Rectangular Plates under Combined loading".	M.K. Alrays, T.H.Abd El- Lateef, M.A. Dabaon.	Bulletin of the Faculty of Engineering and Technology Minia University. Vol.7- Part1- Sep.,1988.	<p>The results of a theoretical study of the buckling of rectangular plates under combined shear and compression loading are presented. Galerkin method is used to solve the von-Karman large deflection equations using a two mode approximation which proved to be sufficient to investigate the large elastic deflection of plates. The nonlinear algebraic equations are solved using a computer program which facilitates the development of the stress distribution within any section of the plate in the postbuckling state. Also, a prediction of the maximum plate carrying capacity is achieved.</p>

3	"Design Approach for Initially Imperfect rectangular plates under combined Loading".	M.K. Alrays, T.H.Abd El- Lateef, M.A. Dabaon.	Bulletin of the Faculty of Engineering and Technology Minia University. Vol.7- Part1- Sep.,1988	Most of the current codes use the effective width approach in addition to the effective yield stress assumption in the design of plates under edge loading of shear and compression. This is an approximate design procedure since it ignores many factors which strongly influence the real behavior of such structural elements. In this paper an analytically based design procedure is presented. The analysis takes into account the behavior of "real plates" by numerically solving the plate large elastic deflection equations.
4	"Über das Tragverhalten der Dübel in SWT-balken".	M.A. Dabaon and F. Tschemmerneegg	Gutachten, Innsbruck University, Feb.1993	Der Gefertigte wurde von der Firma FEDU GmbH beauftragt Gutachten über das Tragverhalten der Dübel, siehe Anlage 1, Seite 1, in den FUNDIA-Balken zu erstellen. Grundlage dieses Gutachtens ist der Versuchsbericht über 6 Trag-lastversuche an SWT-Balken vom 20.12.1991, der ebenfalls vom Gefertigten erstellt wurde. Bei der Erstellung des Gutachtens wurden auch die Schreiben des Instituts für Bautechnik, Berlin vom 1. Juni 1992 an die Herren Mitglieder des Sachverständigenausschusses Verbundbau und das Schreiben des Instituts für Bautechnik, Berlin vom 4. Sept. 1992 mit beiliegenden ZU-schriften an die Firma FEDU mitberücksichtigt.
5	"Zur tragfähigkeit von Verbundträgern bei teilweiser Verdübelung".	M.A. Dabaon and F. Tschemmerneegg K. Hassan and T.H. Abd El- Lateef	Stahlbau 62, Heft 1, 1993.	Load carrying Capacity of Composite Beams under partial shear Interaction. Theoretical investigation of the nonlinear behavior of the interface between a steel beam and concrete slab for a typical composite beam, at different range of the degree of shear connection, was carried out. The plastic limit of the composite section, at different range of the shear connection, as well as the maximum elastic capacity of the composite section are also investigated by using the nonlinear of the interface between concrete slab and steel beam. A computer program was designed to get the above variable and also to control the maximum deflection and the relative end slip between the concrete slab and the steel beam. A comparison between the presented theoretical work and the previous experimental one were in a good agreement with each other.

6	"Contribution to the problem of partial Shear- Interaction of Composite Beams".	M.A. Dabaon.	Ph.D. Thesis, June 1993.	<p>The study of Partial-Interaction is perhaps the most perplexing and intriguing research subject of the composite structures and an attempt is here to clarify what is involved. The main part of the present difficulty arises from the behavior of the connection between the steel beam and the concrete slab.</p> <p>The analysis of the composite beams, either simple or continuous, under partial shear connection is presented for beams being composed of elastic-ideal plastic materials. The actual behavior of the connection between the two materials is studied taking into consideration the non-linear load slip characteristic of the connectors.</p> <p>The great distinction between the full and partial- interaction is brought out, together with the factors affecting the composite action on this issue.</p> <p>The emphasises throughout are on understanding the behavior of the composite beams in partial-interaction and necessity of producing rapid design procedures under any degree of shear connection which is limited till now in the present codes of practices.</p> <p>In this sense, the present experimental work and the theoretical models in this thesis lead to a very good agreement with each other and with the experimental tests of some authors.</p> <p>Design tables for carrying capacity of the composite sections with any degrees of shear connection are provided in the appendix. To control maximum deflection and end slip of a composite beam at serviceability limit states, empirical formulae are proposed herein.</p>
7	"Comparison between Theoretical and Experimental Investigation of Composite Beams with Spiral Shear Connectors".	S.E. Abd- Rabou and M.A. Dabaon	Mansoura Engineering Journal (MEJ) Vol.20,No.1, March 1995	<p>Investigation of the behavior of composite beams with different types of shear connectors (spirals and bent bars) extends to include the comparison between the theoretical study and the experimental results of such type of beams.</p> <p>In this paper, a proposed technique for predicting the shear resistance of the spirals as shear connectors in the composite beams is presented. In this technique, the behavior of the connectors in the elastic ranges is analyzed. Hence, a proposed formula to predict the design shear resistance of the spirals is suggested the comparison between the suggested formula and the experimental results showed a good agreement between them.</p> <p>Moreover, a comparison between the theoretical and the experimental results for the tested composite beams with spirals and bent bars as shear connectors is carried out with respect to ultimate loads, ultimate moments and deflections.</p>

				<p>The common type of shear connectors as bent bars is compared with spiral connectors as well. A discussion for the given formulae of the bent bar shear resistance in both Egyptian and European (EC4) codes together with the experimental results is conducted which many lead to the modification of the Egyptian formula.</p> <p>The comparison between the present theoretical work and the experimental results has shown good agreement.</p>
8	"Experimental and Analytical Study of Composite Rolled and Castellated Beams".	S.E.Abd-Rabou and M.A. Dabaon	Ain Shams International conference.Dec.,1996	<p>In this paper, the behavior of composite rolled S.I. Beams and the corresponding castellated steel beams (concrete around the web only) is studied. This investigation has two main parts: experimental and analytical. The experimental program contains six beams out of which two beams are rolled sections with and without castellation while the other four are composite rolled and castellated sections. The second part include the theoretical analysis of the tested beams concerning the maximum elastic carrying capacity, The behavior of the tested beams in the elasto-plastic region and both the ultimate flexural and shear carrying capacities.</p> <p>The main output of this research includes (1) suggestion of a formula to determine the reduced flexural stiffness cand consequently the deflection in the elasto-plastic range and at the ultimate point for the use of non-liner analysis of steel and composite beams, (2) determination of the effect of the concrete with and without steel reinforcement on the behavior of the of the tested beams, (3) recommendation guidelines for the use in ultimate and serviceability limit states.</p> <p>Moreover, the test result for deflections, strains at different load stages till failure, types of cracks and modes of failure have been recorded during the execution of the testes. The comparison of the analytical results for the tested beams showed close agreement with the experimental results.</p> <p>Keywords: structures; composite; castellated; beams</p>
9	" Unified Theory for the Design of Pile caps".	S.F.Taher., M.A. Dabaon., and F. Zaher.	Ain-Shams University, Faculty of Engineering, Scientific Bulletin, Vol.31,No.4, Part 1, dec.,1996.	<p>The theory postulates that the external energy exerted upon the pile cap system is consumed through a hybrid beam-truss mechanism. Load shares are determined on the basis of stiffness consideration. The predictions of the theory are proved to be in a very close agreement with the available well-established experimental data. Some of the salient features captured by the theory includes ultimate load of the pile cap system, mode of failure and non-uniformity of pile load distribution. The theory shows superiority over other existing formulae and current codes of practice. In addition, it provides</p> <p>Physical insight of the mechanisms of load transfer inside the pile cap.</p>

10	"Fundamentals of Steel Design Course and Design Tables".	M.A. Dabaon.	First edition, El-Manar Center Press, Tanta, Egypt, Oct., 1997.	"Book"
11	"Investigation of Negative Bending Moment's Region of Continuous Composite Beam with Partial Shear-Interaction".	M.A. Dabaon.	37 International Conference, Damascus University, Syria, Nov.,1997.	<p>In this paper a mathematical approach for calculating the different types of deformations the negative bending moment's region of continuous composite beam, in which the reinforced concrete slab lies in tension side, is presented. This slab was connected with the steel beam using ductile non-rigid connectors which have different degrees of shear connection. The theoretical analysis, herein, is conducted by using a computer program which is developed specially for such problem. As an output of the computer program, the relationships between the load and deformations can be obtained along the length of the beam and at any level of static loading till the plastic limit. To verify the theoretical approach, experimental tests have been carried out on two full scale composite models of negative portions with low degrees of shear connection. The experimental results are compared with the present theoretical work which shows a good agreement.</p>
12	"Effect of Degree of Partial Shear Connection on the Behavior of Composite Frame"	M.A. Dabaon.	Al-Azhar Eng. Fifth International Conference, Cairo, EgyptD e.,1997.	<p>Throughout the review of the previous work and the international codes(1,2) it has been found that no rules were given to the effect of the degree of the shear connection of a composite girder on the global behavior of the frames;(shear connection lies at the interface between the steel girder and the reinforced concrete slab). In this paper, a contribution to the effect of the degree of the shear connection on the global analysis of a composite frame is presented.</p> <p>To overcome the problem, a theoretical model depending on the partial interaction theory of composite member is achieved. A flexural stiffness equation depending on the properties of the composite cross-section and the degree of the shear connection is predicted as well.</p> <p>This predicted equation is easily suitable to be used with any finite element program in order to study the effect of the flexural stiffness on the global analysis of a composite frame.</p> <p>Numerical problems have been solved by using finite element program for the reason of comparison between the present model using partial shear connection and both of full-and no-shear connection of the girder. Also, an empirical formula to estimate the</p>

				<p>maximum deflection of the composite girder with partial shear connection is proposed. It has been proved that the degree of shear connection dominates the value of the flexural stiffness of the girder of the frame. Sequentially, the degree of shear connection has a considerable effect on the maximum deflection along the girder of the frame. Also, the critical buckling load is slightly influence by the change of the degree of the shear connection.</p>
13	" Experimental and Analytical Study of Composite Rolled and Castellated Beams Subjected to Torsional Moment"	M.A. Dabaon.	<p>First International Conference on Civil Engineering, Helwan University, ICCE-I, Cairo, Egypt, March1998 and Festschrift Commemorative Publication, Institute of steel and timber and mixed building Technology, Innsbruck, Austria, September 1999.</p>	<p>This paper is a part of a running research program on composite structures carried out by the author and executed in the Laboratory of Heavy Structures, mansoura University. The behavior of composite rolled and castellated steel beams(the concrete encasing the web)subjected to torsional moment as well as non-composite beams for both elastic and ultimate stages are investigated. The distribution of the ultimate normal and warping stresses for rolled and castellated steel cross sections are suggested. Analytical model for composite cross-section has been proposed. The ultimate capacity of the composite cross-section using steel and castellated profiles is also successfully estimated. To evaluate the proposed analytical models for both composite and non-composite cross-sections using rolled and castellated profiles, an experimental program is carried out. This program contains six different beams. A good agreement between the proposed theoretical and the experimental results has been found.</p> <p>Therefore, the comparison between the experimental results of rolled steel beams, as a reference, and the other five beams shows that the concrete encasing the web of castellated beams with stirrups can sustain significantly a high torsional moment. Also, a considerable improvement of the beam torsional rigidity due to the composite action is achieved.</p> <p>Keywords; Composite; Steel; Castellated; Torsion.</p>
14	"Buckling of Rectangular steel plates with Opening under Linearly Distributed Compressive Stresses"	M.A. Dabaon.	<p>Ain-Shams University, Faculty of Engineering, Scientific Bulletin, June1998.</p>	<p>In This paper, The elastic buckling problem of a rectangular plate with an opening at any arbitrary position in the plate is theoretically analyzed. The pierced plate is simply supported along all edges and is subjected to in-plane liner edge compression. The methodology of the analysis depends mainly on the use of the minimum potential energy technique with some practical assumptions. The influence of the in-plane edge stresses factor (<math>\psi = \frac{b}{a}</math>) and the position of the opening within the plate, upon the buckling load, are investigated. Explicit expression is derived from which the buckling load of the</p>

				<p>plate (in terms of the opening location, opening dimension and the applied edge compressive stress gradient <math>\psi</math> ) can be calculated. Also, simplified expressions with good accuracy as well as graphs are proposed for the daily practical use. To verify the present analysis, comparison between the results of the present analysis and available published results of experimental as well as previous theoretical analysis show good agreement. It is recommended to check the ability of using the present expressions in the Egyptian Code of practice for Steel Constructions and Bridges.</p>
15	"Composite Frame With Semi-Rigid Joints"	M.A. Dabaon.	Tanta University, Faculty of Engineering, Review Article, September1998.	<p>This review article reports mainly the progress in the researches on the composite frames with semi-rigid joints. The experimental and the analytical investigations, including mathematical and numerical modeling, are summarized and discussed. The material data is collected from reports, researches and codes. The different methods of analysis are also presented and discussed. Anther important aim of this review article is to capture the attention to the shortage of the background information from which a futher number of research projects may be achieved.</p>
16	"An Appraisal of a New Approach for Moment Capacity Prediction for Steel Beam-to-Beam Connection".	M.A. Dabaon, F.A. Zaher.	Ain-Shams University, Faculty of Engineering, Scientific Bulletin, Vol.35,No. 1,March 31,2000.	<p>In This paper, the behavior of steel beam-to-beam connection has been investigated. The study involves different details for bolted beam-to-beam connection. Experiments are performed on twelve simply supported beams having the same span and the same steel profile using different splice variables. This experimental program is conducted to cover three important factors, which should be considered in developing a suitable beam-to-beam connection. These factors are(1) the thickness of splice plates (has been chosen 4,6 and 8 mm), (2) the location of the splice along the beam length (has been tested at the position of pure maximum bending moment and low value of bending moment combined with high shearing force.) and (3) the inclination of the splice on the beam center line (<math>\theta = 450</math> , 900 and 1350). Based on the present experimental results and the previous common method of analysis, the lack of information about the design provision has been demonstrated. Also, the best position, inclination and influence of the thickness of the splice plates have been evaluated. Anew theoretical approach, for calculating the beam plastic capacity has been suggested. Recommendations for the codes and practice requirements have been also drawn.</p>



17	" Buckling of Columns With Sudden Change in Cross Section".	T.H. Abd El- Lateef, M.A. Dabaon, O.M. Abdel - Moez, M.I. Salama.	Mansoura Third International Engineering Conference, 11-13 April 2000.	In this paper, the analysis of a column with sudden change in cross section (hole or holes) is presented using the minimum potential energy technique. As a matter of fact, the moment of inertia at the hole location is suddenly reduced by a certain ratio of the column cross section. This reduction of the cross section inertia is significantly affecting the value of the critical buckling load. In the present work, a column with various end-conditions such as: pinned ends, simple-fixed ends and fixed-free ends are studied. The analyses of these columns depend on assumed deflection functions, which satisfy exactly the end conditions of each case. The buckling loads for each case of end conditions for a column with hole (or holes) with any size at any arbitrary position along the column length, are given in simple equations presenting good results compared with the available previous Work.
18	"Buckling Loads of Columns With Gradually Changing Cross-Section Subjected to Combined Axial Loading".	T.H. Abd El- Lateef, M.A. Dabaon, O.M. Abdel - Moez, M.I. Salama.	Fourth Alexandria International Conference on Structure and Geotechnical Engineering, 2 – 4 April 2001.	In this paper, the elastic stability of a column with variable cross-section subjected to combined distributed and concentrated axial load is presented. The analysis is carried out by using the minimum potential energy technique. The moment of inertia and the load intensity at different cross-section are varied according to power of the distance along the column length. The buckling loads for perfect columns are given in explicit expressions for a wide range of the power of the function of the moment of inertia and the power of the load intensity function. Also, a simple, yet accurate expression, for the critical buckling coefficient is obtained instead of using the explicit expression. A comparison between the result of the present analysis and that of some previous studies shows the accuracy and the simplicity of the developed method to find the critical load in such cases. Keywords: Buckling, Columns, Combined loading, Variable cross section.
19	"A New Approximate Approach for Calculating The Effect Of Lateral Buckling".	M.A. Dabaon.	Ninth International Colloquium on Structure and Geotechnical Engineering, Ain Shams University, Cairo, Egypt. 10 -12 April 2001.	In this paper, an approximate approach for the assessment of the effect of lateral buckling of beams with either constant or linearly varying I-Section (tapered beams) is presented. This approach depends mainly on the simulation of the compression flange as a compression member. This distribution of the compression force, in the flange, depends on the distribution of the bending moment along the beam length. The different equations of stability, in the cases of various loading and cross section, have been solved using the minimum potential energy technique. The predicted expressions are verified by means of experimental tests and compared with the results of other researches. An experimental program of four tapered beams,

				<p>with identical cross sections, has been carried out. Three beams of lengths( 2.8,3.8 and 4.8 m) have been tested under central load acting at the shear center of the middle cross section. The compression flange of the fourth beam has been stiffened by a small truss system for restraining against lateral buckling and it has been tested by the same technique. The comparison between the result of the present approach, experimental tests and other researches showed a good agreement and reflected the simplicity of the predicted expressions. Thus, accurate values for the effect of lateral torsional buckling are predicted and provided in simple forms suitable for design purposes.</p> <p><b>Keywords:</b> structures, steel beams, lateral torsional buckling, stability</p>
20	"Effective Width of Composite Beam at Region of Negative Moment".	M.A. Dabaon.	Ain- Shams University, Faculty of Engineering, Scientific Bulletin, Vol.37, No. 1, March 31,2002.	<p>In this paper, the influence of the effective width (beff) at hogging moment (the slab lies in tension zone) on the behavior of the steel-concrete typical composite continuous beam is investigated. In Euro code, for the design of steel-concrete composite structures (EC4), a certain value of this width was given to place the longitudinal reinforcement that may be assumed to contribute to the hogging moment of resistance of the beam. Herein, an experimental work including nine full-scale composite beams was conducted at the Laboratory of Heavy Structure, Faculty of Engineering, Tanta University. The region of negative moment (hogging) where the slab lies in the tension side was only tested. The parameters taken into consideration and affecting the strength, deflection and ductility of the composite beam were (1) the width (beff) which defines the region of the slab where the longitudinal reinforcement is distributed, (2) the amount of the longitudinal reinforcement (As), and (3) the amount of transversal reinforcement (A,s). The measurements were the strains and deflections at different stages of loading. The experimental work results were combined with some other available information to formulate recommendations for designers and researches concerning the analysis, design and construction aspects of steel-concrete composite continuous beam for buildings and bridges. The comparison between the experimental results and those obtained from calculations according to the current EC4 shows that the effective width, where the longitudinal reinforcement is assumed to be placed, has a significant influence on the strength and ductility of the beam.</p>
21	"Early Prediction of	M.A. Dabaon,	ASCE-EGS, III Regional	The beam-to-column joints are often described as pinned or rigid. Due to the effect of

	<b>Initial Stiffness of Composite Joints".</b>	<b>M.H. Boghdadi, E.A. El-Kasaby and N.N. Gerges.</b>	<b>Conference on Civil Engineering Technology, April 2002.</b>	<b>the joint details, the joint may be defined as semi-rigid one. In Eurocode3, Annex J, the value of the initial rotational stiffness of the joint can be estimated. In this paper, variety of steel and composite joint details are classified and demonstrated. Depending on Eurocode3 and some realistic assumptions for these details, formulae to calculate the initial rotational stiffness are predicted and tabulated. Comparisons between the results of the present predicted formulae and those obtained from the Module Bank System, for semi-rigid joints, show the accuracy yet simplicity of the present work. It is also recommended to implement these formulae by the Egyptian code committee in order to be used for pre-design purposes.</b>
<b>22</b>	<b>"Behavior and Strength of Partially Encased Beams With Built-up Sections Having This Steel Webs".</b>	<b>M.A. Dabaon.</b>	<b>Ain- Shams University, Faculty of Engineering, Scientific Bulletin, Vol.37, No. 3, September, 30, 2002.</b>	<b>In this paper, a comprehensive study has been conducted to investigated the behavior and strength of a new type of partially encased composite beams constructed with this-walled webs. Concrete is poured between the flanges along the steel length in which connected stirrups are welded to the beam web. The use of thin web encased in reinforced concrete for the beam cross-section aims to alleviating the codes restrictions for height to thickness ratio of the web (hw/tw) leading to more cost-effective beams. This paper describes and presents the results of testing seven full-scale beams with different parameters. These parameters are: (1) type of beam (bare steel or composite), (2) amount of transverse stirrups along the beam length and (3) the height to web thickness ratio. Design proposals in the view of EC4 and ECP2001 have been proposed. The experimental results gave a good agreement with the relevant results out of the available codes under the present recommendations of design proposals.</b>
<b>23</b>	<b>"Buckling Analysis of Steel Plates with Stiffened Opening Subjected to In-Plane Combined Stresses".</b>	<b>M.A. Dabaon and G.M. Atia.</b>	<b>Al- Azhar Eng. 7th International Conference, April 7-10, AEIC 2003.</b>	<b>This paper Presents a theoretical elastic buckling analysis of steel rectangular plates with stiffened or unstiffened openings. The plate is subjected to in- plane combined linearly varying compressive and shearing edges stresses. In this analysis, the plate is assumed simply supported along all edges. The location and the size of the opening, the stiffeners position and the cross section area of the stiffeners are the main parameters studied. Moreover, the compressive stress gradient (<math>\Psi</math>) and the ratio of applied nor stresses on the plate edges are taken into account. The minimum mal and shear potential energy technique is used to analyze and solve the general mathematical formulations of the plate buckling under the aforesaid situation Explicit equations as well as simplified ones are derived from which the buckling load of the plate can be obtained.  The present predictions of the analysis are shown to be in a good agreement with the</b>

				theoretical and experimental previous studies available. The predicted equations, graphs and the computer are found to be more rational, accurate and versatile for design engineers.
24	"Experimental and theoretical study of curved rolled and castellated composite beams".	M.A. Dabaon, M.I. El-Naggar, N.M. Yossef.	Alexandria University, Faculty of Engineering, Scientific Bulletin, March 2003.	This paper is focused on the investigation of the behavior of curved composite rolled and castellated beams in which the web is encased in concrete. A series of experimental tests is carried out on six full-scale curved beams. A reference test of a straight composite castellated steel beam is also conducted. Moreover, a nonlinear finite element analysis is presented. The analytical models were verified by means of different comparisons. The deformation and ultimate loads were found to be in good agreement with the corresponding values predicted by using the present finite element models. A parametric study including 32-numerical applications including the main effective variables was carried out. The effects of the angle of curvature in plan as well as the type of beam cross-section (bare steel, composite rolled or composite castellated) were taken into consideration. From this research, the present finite element models were found to be suitable for representing real composite curved beams whether rolled or castellated. One of the most important results of the present parametric study is the classification of curved beams according to their angle of curvature. Moreover, significant improvement of the torsional rigidity of castellated beams due to composite action was distinctly observed. Finally, design guidelines for designers were achieved.
25	"Modeling of Composite Beam With Partial Shear Interaction".	W. M. Abou Elmagd, A. A. Seleemah, M. A. Dabaon, and A. H. Salem.	Tenth International Colloquium on Structure and Geotechnical Engineering, 22 -24 April 2003. Ain Shams University, Cairo, Egypt.	This paper is concerned with of modeling of steel-concrete composite beams taking into consideration the degree of shear interaction between the steel beam and the concrete slab. The version of ANSYS 5.4 Program is used to analyze the nonlinear behavior of partial shear interaction of composite beams under different loading and boundary conditions. The elements used to represent concrete, steel, and connectors are briefly described. To achieve the most reliable nonlinear behavior of stud shear connectors, a study of three different models of stud connectors is presented. Concrete is represented as nonlinear material, considering tension stress, strain softening, open and closed cracks shear transfer, as well as crushing capabilities. The steel is represented as a nonlinear isotropic material with strain hardening capability after yielding, and strain softening after ultimate stress. The results obtained using the proposed models are shown to compare very well with those obtained from both experimental and theoretical analyses of steel-concrete typical composite beams up to failure.

26	"Moment-Rotation Relationship for Base Connections with Different Detail Configurations"	F. A. Zaher, M. A. Dabaon, and E. Amoush.	Ain- Shams University, Faculty of Engineering, Scientific Bulletin, Vol.39, No. 3, September, 30, 2004.	<p>In this research, a finite element technique for both liner and nonlinear analyses of base connections has been integrated with the problems of fixed base detail configuration. The analysis is conducted to investigate both of the base plate and the type of detail configuration and then, the global frame analysis is considered. In case of linear analysis of the base plate, the base plate is divided into number of shell elements with six-degrees of freedom. The underneath concrete has been idealized in the form of uncorrelated gap elements (as compression members only).</p> <p>The attached anchor bolts are treated as elastic springs that sustain tensile, compression and shear resistance. The analysis is focused on base detail configuration, attachment size, stiffeners arrangement and height aspects of base elements as well as the global frame analysis. In this respect, the buckling lengths and the lateral displacements of multi-story and multi-bay frames have been also investigated. The results of the present analysis have been verified by means of comparisons with other researches. Empirical formulas to calculate the moment-rotation relationship for different base detail configurations have been suggested. These formulas are accurate and rather simple for daily application use.</p>
27	"Flexural Fatigue Performance of Fiber Reinforced Concrete"	S. A. okba, M. A. Dabaon, A. A. Maaty, E. A. Showaib, and M. A. Abdelaty.	El Minia international conference, El Minia, Egypt, April 2005.	<p>In this paper, flexural fatigue behavior of fiber reinforced concrete containing different fiber types with different fiber volume fractions is experimentally investigated. One type of glass fibers and two types of polypropylene fibers are studied. Concrete beam specimens from plain and different fiber reinforced concrete mixes were prepared. The prepared beams were tested after about three months to avoid strength gain during fatigue testes. Using data acquisition system capable of performing 1000-loop per second, load and central deflection measurements were recorded for all beams until failure. In addition, number of loading cycles was intermittently recorded in case of fatigue testes. Based on load deflection relationship in static flexure, toughness and toughness indices of fiber reinforced concrete mixes were evaluated employing ASTM C1018 procedure.</p> <p>The results indicate major enhancements in toughness due to the fiber addition with increasing of fiber volume fractions. Also improvements in the fatigue lifetimes were recorded with fiber reinforced concrete compared with plain concrete and also with increasing of fiber volume fractions. The test results show also that polypropylene fibers play better in fatigue at low stress levels compared with higher ones. Furthermore, the results show that fatigue failure of concrete may be divided into three stages;</p>

				<p><u>stage I</u> which may be attributed to crack initiation, <u>stage II</u> is attributed to crack propagation that constitute the majority of the fatigue lifetimes and <u>stage III</u> which is the final failure stage. The sizes of these stages were found to be depending on fiber types and stress level.</p> <p><b>Keywords:</b> Fibers, fiber reinforced concrete, toughness, toughness index, flexural fatigue</p>
28	"Fatigue Fracture of Fiber Reinforced Concrete Analysis by Fracture Mechanics".	S. A. okba, M. A. Dabaon, A. A. Maaty, E. A. Showaib, and M. A. Abdelaty.	El Minia international conference, El Minia, Egypt, April 2005.	<p>In this paper, fatigue crack growth of fiber reinforced concrete beam specimens is experimentally investigated. The crack growth is indirectly investigated considering the change of the flexural stiffness with number of loading cycles. Identical mid-span notched beams were cast, cured and experimentally tested after about 90 days. One type of glass fibers and two types of polypropylene fibers with different aspect ratios are studied. During the test, load, central deflection and number of loading cycles are recorded using data acquisition system capable of performing 1000-loop per second. Test results of the tested beams are analyzed by fracture mechanics concept. This analysis began with the well-known empirical Paris's law for fatigue fracture of metals and its modifications made by Foreman to suite concrete. Herein, a useful formula capable of predicting fatigue lifetimes or the remaining fatigue lifetimes is proposed. The proposed formula is a modified one for Foreman's formula.</p> <p>In this research, an important finding indicates that the deflection at failure of fiber reinforced concrete beams under constant amplitude fatigue loading may be predicted using load deflection curve in static without performing fatigue tests but if the loading rates are similar. The predicted fatigue lifetimes employing the proposed formula are well comparable with those experimentally obtained.</p> <p><b>Keywords:</b> Fibers, fiber reinforced concrete, fracture mechanics, flexural fatigue, crack growth.</p>
29	"Behavior of Shear Connectors Using Normal and High Strength Concrete" Part(1) Experimental study	M.A. Dabaon and M. Fahmi.	11th ICSGE (Eleventh international colloquium on structural and geotechnical Engineering), Ain Shams University, Cairo, Egypt, May,2005.	<p>Use of steel-concrete composite construction in modern buildings is now popular. On the other hand, the use of high strength concrete has become widespread in the recent decades. The composite element made of high strength concrete is lacking. In this paper, twenty two push-out tests were constructed to investigate experimentally the behavior of different types of shear connectors (angles, channels and studs) embedded in both normal and high strength slabs under static loading. Number of variables affecting the behavior of the shear connectors has been experimentally studied in seven groups.</p>

30	"Behavior of Shear Connectors Using Normal and High Strength Concrete" Part(II) Theoretical study	M.A. Dabaon and M. Fahmi.	11th ICSGE (Eleventh international colloquium on structural and geotechnical Engineering), Ain Shams University, Cairo, Egypt, May,2005.	Theoretical work is carried out by using finite element package to study the strength and the behavior of stud shear connectors embedded in high strength concrete. The non-linear properties of materials were taken into consideration in the finite element modeling. The theoretical study is verified by using the results of the experimental program in the previous part of this paper. Parametric study was also carried out to study the effect of yield stresses of welds, values of concrete compressive strengths and stud diameters on the strength and the behavior of stud shear connectors. From theoretical investigation, design provisions are proposed for the prediction of number of studs to be used in composite beams for different concrete strengths and different diameters; taking into consideration the effect of welds types. Keywords: composite construction, high strength concrete, push-out tests, normal strength concrete, shear connectors.
31	"Long-Term Behavior of Externally Prestressed Composite Beams With Flexible Shear Connection".	M.A. Dabaon, M.A. Sakr and O.F. Kharoub.	11th ICSGE (Eleventh international colloquium on structural and geotechnical Engineering), Ain Shams University, Cairo, Egypt, May,2005.	This extended abstract presents 3D and uniaxial finite element models for describing the long-term behavior of externally prestressed composite beams. The interaction among different parameters that affect the long-term response of such beams, i.e., nonlinear connection flexibility, creep and shrinkage of concrete, relaxation of prestressing tendons, and nonlinear behavior of component materials is considered. Verifications of the results of the proposed models are achieved using the available experimental results. Numerical examples, demonstrating the effectiveness, reliability, and capability of the proposed model are presented taking into account different long-term factors and degrees of shear connection.
32	"Ultimate Behavior of Externally Prestressed Composite Beams With Partial Shear Connection".	M.A. Dabaon, M.A. Sakr and O.F. Kharoub	11th ICSGE (Eleventh international colloquium on structural and geotechnical Engineering), Ain Shams University, Cairo, Egypt, May,2005.	This paper presents a 3D finite element model for analyzing externally prestressed composite beams with partial shear connection under general conditions. Generic nonlinear constitutive laws that govern the behavior of the materials of concrete slab, steel beam, and tendons have been considered. Also, the nonlinearity of the shear connection is taken into account. The problem of the cable slip at the saddle is treated using two models. One for the straight tendons and the other for rectilinear (draped) tendons. Comparative study between the present analytical and available experimental results to establish the validity of the proposed model is presented. Also, a simplified finite element model suitable for the design applications with acceptable accuracy is presented and verified using the 3D model. The paper introduces a tool for the analysis of externally prestressed composite beams with flexible shear connection up to failure in order to investigate the influence of the degree of shear connection on the ultimate capacity. Finally, a comparison between the behavior of composite beam prestressed with external straight or draped cables is illustrated.

33	"Steel Bridges Course".	M.A. Dabaon,	Faculty of Engineering, Tanta University Press, First Edition,2005.	"BOOK"
34	"Investigation of Buckling Behavior of Slender Plate Girders Under Concentrated Loads".	T.H. Abd El- Lateef, M.A. Dabaon, S.A. Tohamy, O.M. Abdel- Moez, A.B. Sadeek.	Al- Azhar Eng. 9th International Conference. Vol.2,No.3,PP.721-737 April 12-14, 2007	<p>The experiment analysis performed in this paper is to perform a parametric study on plate girders under pure bending moment. This includes the attainment of the cross section critical load. The experimental tests are performed on four plate girders. The specimens were subjected to two concentrated loads located at equal distances from the end supports causing a uniform bending moment between the loads. The tested model features, the material properties and measurement instruments are described in details.</p> <p>The theoretical analysis is based on a finite element model using program(ANSYS). The ANSYS models are used to validate the experimental results by simulating the actual behavior of slender plate girders subjected to bending by incorporating all the nodes, elements, material properties, dimensions and boundary condition.</p> <p>The girders are tested to failure and, the results of the tested girders are theoretically analyzed through their mechanical behavior under the two point loading system. The comparisons and the evaluation of the suggested finite element modeling are also verified through the results of the dials readings.</p> <p>This investigation requires a full plot, of gradual loading of the girders applied loads versus displacements. Various combinations of cross-sections and span configurations were generated and the resulting profiles were studied to investigate the influence of these factors.</p> <p>The cross section may be classified in two groups, compact and non-compact flange with different values of slenderness ratio of the web.</p> <p>The results from the finite element model showed a good agreement with the experimental results. The comparison showed that the finite element model results had the strongest correlation with the experimental results.</p>



35	"Prediction of Buckling Load in plate Girders Subjected to Pure bending Moment".	T.H. Abd El- Lateef, M.A. Dabaon, S.A. Tohamy, O.M. Abdel- Moez, A.B. Sadeek.	Al- Azhar Eng. 9th International Conference. Vol.2, No.3,PP.890-912 April 12-14,AEIC 2007.	<p>The design of plate girders, like any other structures, is linked with many important parameters. One of these important aspect is the interaction between the flange and web which determines the capacity of the girder under loading. In this paper a theoretical analysis was carried out to investigate the buckling behavior of the web plate in the plate girders in the portion of the pure bending moment, i.e. in the case of simply supported beams subject to symmetric concentrated loads.</p> <p>The theoretical analysis is performed using the finite element program (ANSYS 5.4). Three hundred dimensional finite element models were examined to clarify the influence of section compactness, aspect ratios of web panel and initial imperfections formula to estimate the critical load of plate girder under pure moment from load-lateral displacement data is also proposed. The critical loads of such girders computed from the present prediction equation were compared with those according to different methods.</p> <p>The procedure adopted in the paper in directed to suggest some accurate and simple procedures from which a fairly good estimate for the critical moment can be obtained, taking into account the real boundary conditions between the web and the flanges. Thus, two different suggestions were undertaken. The first formula can be used to determine the critical moment from practical or theoretical data concerning the relationship between applied loads and web out- of plane deformations. The second approach is concerned with the estimation of the critical moment from a reasonably accurate and simple stress distribution on the cross section.</p>
36	"Finite Element Modeling of Extended Endplate Connections Subjected to Static or Cyclic Loading".	T.M. Khalifa, S. El-Khoriby, M.A. Dabaon, and M.A. Kassem.	Ain- Shams University, Faculty of Engineering, Scientific Bulletin, Vol.42, No. 2, june, 30, 2007.	<p>This paper describes the finite-element modeling philosophy employed to analyze bolted end-plate connection that are subjected to static or cyclic loading. The increase in the use of extended end-plate bolted connections in steel structures has highlighted the need for design methods that produce economical bolted connections and members. The development of a design model for a particular connection type normally follows the determination of the connection behavior using experimental or numerical methods. The ANSYS finite-element package is used to generate two models with parameters drawn from previous experimental studies of extended end-plate connections in order to compare the analyses with test results. Modeling of the separation of end-plate from the column flange and modeling of the contact conditions between bolts, end-plate and column flange are included. The results obtained from the finite-element analyses are evaluated and the effectiveness of the model, assessed by comparing the numerically</p>

				<p>predicted ultimate loads and moment-rotation responses with those of the corresponding tests. The effect of degree of semi-rigidity of frame joint under dynamic loading are demonstrated.</p> <p><b>Keywords:</b> Finite-element; bolted connection; cyclic loading; semi-rigid; Hysteretic loop; seismic.</p>
37	"Analytical and Experimental Study of Horizontally Curved Thin-Walled Panel Subjected to Bending Moment"	M.A. Dabaon, M.A. Boghdadi, N.M. Yossef, M. Hassanen and M. Alaghoury.	Third International Conference on Structural Engineering, Mechanics and Computation (SEMC2007), Cap Town, South Africa, 10-12 September,2007.	<p>Plate girders curved in plan are increasingly used in modern highway bridges and in major buildings. Using thin-walled panels for such structural elements has many advantages for aesthetic, economic, and manufacturing reasons. However, most of current design guides for such elements are either conservative or not clearly allocating safety factors to the different aspects of the design. This is, perhaps, due to the fact that the behavior of</p> <p>I- Beams and curved in plan plate girders is complex to analyze yet alone to develop simplified, but reliable, design procedures. Therefore, a more rigorous analytical approach, backed by experimental results, is needed to enhance our understanding of the behavior of curved thin-walled girders under various load conditions with considerable post-buckling reserve strength. This paper provides some details of an experimental study carried out on medium scale curved thin-walled steel girders subjected to pure bending moment about their majoraxis. Comparison between the test results and results from numerical modeling shows excellent agreement. An analytical approach to predict the behavior of similar element is suggested.</p>
38	"Semi-rigid Joints in Bare Steel and Composite Frames Subjected to Loading in Space, Part I: Experimental Program".	M.A. Dabaon, M.A. Boghdadi, and O. Kharoob.	12th ICSGE (Twelfth international colloquium on structural and geotechnical Engineering), Ain Shams University, Cairo, Egypt, December, 2007.	<p>In this paper, an experimental investigation is made to study the behavior of space steel and composite semi-rigid joint. Normal force and bending moment acting on minor-axis are considered. Five full scale tests are performed on semi-rigid space steel and composite joints with extended endplates. The experimental program studies the effect of loads, in the minor direction, on the behavior of the semi-rigid joint in the major direction. The experimental results are used to calibrate the finite element model as can be seen in the companion paper (Part II).</p> <p><b>Keywords:</b> Experimental study, semi-rigid joint, minor axis, major axis, composite, space frame.</p>

39	"Semi-rigid Joints in Bare Steel and Composite Frames Subjected to Loading in Space, Part II: Finite Element Modelling".	M.A. Dabaon, M.A. Boghdadi, and O. Kharoob.	12th ICSGE (Twelfth international colloquium on structural and geotechnical Engineering), Ain Shams University, Cairo, Egypt, December, 2007.	<p>In this paper, a 3D finite element model is proposed using ANSYS software for the analytical investigation. Comparative study between the present analytical model and the experimental results, previously performed in part I, is presented to establish the validity of the proposed model. Also, an application is made on space frame to show the difference between frame with rigid joint and with various semi-rigidity. This application is modeled as a simple model and was verified with pervious study. In addition comparative study between space and plane frame is presented.</p> <p>Keywords: semi-rigid joint, minor axis, major axis, finite element modeling, analytical study, composite, space frame.</p>
40	"Analytical Bending Behavior of Curved Thin-Walled panels".	N.M. Yossef, M. Hassanen, M.A. Dabaon, M.A. Boghdadi and M. Alaghoury.	2008 Structure Congress Conference, Vancouver, Canada 24-26 April 2008.	<p>Curved alignments of highway bridges are often necessary for smooth traffic. Furthermore, architects are increasingly opting to more curves in building as aestheticism is being an important element in most designs. Unlike the case of un-curved structural elements, curvature induces complicated stresses and element behavior can be quite different from the behavior of similar but straight element. This research aims to develop an analytical procedure to predict the behavior of curved thin-walled curved beams and develop a formulation that helps design against out-of-plane buckling. The analytical approach considers the nonlinear behavior and large deformation. An extensive theoretical investigation on large displacement behavior has been carried out using the principle of minimum total potential energy and compatibility equation. The paper presents the nonlinear equations that describe the elastic behavior of curved thin walled panel. To verify the proposed equations, out of plane displacements are compared with the results of experimental testing. The proposed equations give a good agreement with the test results.</p>
41	"Finite Element Analysis of Curved Thin-Walled panels".	N.M. Yossef, M. Alaghoury, M.A. Dabaon, M.A. Boghdadi, and M. Hassanen,	Conference of the faculty of tech. Military, Egypt, 2008.	<p>Two previous published papers by the writers describing the nonlinear behavior of curved I-girder web panels subjected to pure bending, were presented including experimental and theoretical analysis. The web slenderness limitation was also presented. A finite element analysis was needed to validate the applicability of the web slenderness limitation. This paper presents geometrical nonlinear finite element analysis for curved panels. To simulate the behavior of curved thin-walled panel subjected to pure bending, three dimensional model is presented. The effect of flange slenderness on the web buckling was also investigated. The flange slenderness limitation of the straight panel presented in Euro Code 3 is used for calculating the flange slenderness limitation for curved thin-walled panel.</p>

42	Fundamental of steel structure, LRFD.	M.A. Dabaon.	1ST Edition, Tanta press, Nov., 2008.	"BOOK"
43	"Composite structure.	M.A. Dabaon.	Tanta press, Nov., 2008.	"BOOK"
44	Steel Design Tables.	M.A. Dabaon.	Tanta press, Nov., 2008.	"BOOK"
45	"A comparative Experimental Study between Stiffened and Unstiffened Stainless Steel Hollow Tubular Stub Columns".	M.A. Dabaon, M.H. Boghdadi, and M.F. Hassanen.	Journal of Thin-Walled Structure, doi:10.1016/j.tws2008.05.2008, pp73-81,47/2009.	<p>This paper presents a comparative experimental study between stiffened and unstiffened stainless steel hollow tubular stub columns using the austenitic stainless steel grade EN 1.4301 (304). Stainless steel structural shapes are becoming increasingly complex as cold-forming techniques are advancing.</p> <p>The un stiffened stainless steel tubular stub sections were fabricated by welding four angles or two channels tip-to-tip, whereas the stiffened sections were fabricated by welding four lipped angles or two lipped channels at the lips. Therefore, the stiffeners were formed at the mid-depth of the section. In total, five columns without stiffeners and five columns with stiffeners were tested. Series of testes were performed to investigate the effects of cross-section shape on the behavior and strength of stainless steel tubular stub columns. The measured average overall depth-to-width ratios (aspect ratio) varied from 1.0 to 1.8. The depth-to-plate thickness ratio of the tube sections varied from 60 to 90. Different lengths of columns were selected to fix the length-to depth ratio to a constant value of 3. The specimens were subjected to uniform axial compression. The column strengths, load-axial strain relationships and failure modes of the columns are presented. The column strengths obtained from the experimental study were compared with the design strengths calculated using the European code for cold-formed stainless steel structures and the ASCE Standard. The results of the experimental study showed that the design rules specified European specifications and ASCE standard generally overestimate the column strengths of stainless steel square and rectangular hollow section stub columns fabricated by cold-forming and welding and welding.</p>

46	"Experimental Investigation on Concrete- Filled Stainless Steel Stiffened Tubular Stub Columns".	M.A. Dabaon, M.H. Boghdadi, and M.F. Hassanen.	Journal of Engineering Structure, doi:10.1016/j.engstruct 2008. 08.017, pp300-307, 31/2009.	<p>This paper presents an experimental investigation on concrete-filled normal-strength stainless steel stiffened tubular stub columns using the austenitic stainless steel grade EN 1.4301 (304). The stiffened stainless steel tubes were fabricated by welding four lipped angles or two lipped channels at the lips. Therefore, the stiffeners were formed at the mid-depth of the section. In total, five hollow columns and ten concrete-filled columns were tested.</p> <p>The longitudinal stiffener of the column plate was formed to avoid shrinkage of the concrete and to behave as a continuous connector between the concrete core and the stainless steel tube. The behavior of the columns was investigated using two different nominal concrete cubic strengths of 30 and 60 MPa. A series of tests was performed to investigate the effects of cross-section shape and shape and concrete strength on the behavior and strength of concrete-filled stainless steel stiffened tubular stub columns. The measured average overall depth-to-width ratios (aspect ratio) varied from 1.0 to 1.8. The depth-to-plate thickness ratio of the tube sections varied from 60 to 90. Different lengths of columns were selected to fix the length-to-depth ratio to a constant value of 3. The concrete-filled stiffened stainless steel tubular columns were subjected to uniform axial compression over the concrete core and the stainless steel tube to force the entire section to undergo the same deformations by blocking action. The column strengths, load-axial strain relationships and failure modes of the columns are presented. Several comparisons were made to evaluate the test results. The results of the experimental study showed that the design rules, as specified in the European specifications and the ASCE, are highly conservative for square and rectangular cold-formed concrete-filled normal-strength stainless steel stiffened stub columns.</p> <p style="text-align: right;">© 2008 Elsevier Ltd. All rights reserved</p>
47	"Confinement Effect of Stiffened and Unstiffened Concrete-Filled Stainless Steel Tubular Stub Columns".	M.A. Dabaon, S. Alkhoriby, M.H. Boghdadi, and M.F. Hassanen.	Journal of Engineering Steel Research pp 1846-1854,65/2009.	<p>This paper presents a comparative study between stiffened and unstiffened concrete-filled stainless steel hollow tubular stub columns using the austenitic stainless steel grade EN1.4301(304). Finite element analysis of concrete-filled stainless steel unstiffened tubular stub columns is constructed herein based on the confined concrete model recently available in the literature. It is then compared with the experimental results of concrete-filled stainless steel stiffened tubular stub columns. The stiffened stainless steel tubular sections were fabricated by welding four lipped angels or two lipped channels at the lips. The longitudinal stiffener of the column plate was formed to avoid shrinkage of the concrete and to act as a continous connector between the concrete core and the stainless steel tube. The behavior of the columns was</p>

				<p>investigated using two different nominal concrete cubic strengths of 30 and 60 MPa. The overall depth-to- width ratios (aspect ratio) varied from 1.0 to 1.8 The depth-to-plate thickness ratio of the tube sections varied from 60 to 90. The stiffened and unstiffened concrete-filled stainless steel tube specimens were subjected to uniform axial compression over the concrete and stainless steel tube to force the entire section to undergo the same deformations by blocking action.</p> <p>The ABAQUS6.6 program, as a finite element package, is used in the current work. The results of the comparative study showed that the stainless steel tubes in stiffened concrete-filled columns offered a high average of increase in the confinement of the concrete core than that of the unstiffened concrete-filled columns.</p> <p>© 2009 Elsevier Ltd. All rights reserved.</p>
48	"Experimental and Numerical Model for Space Steel and Composite semi-Rigid joints"	M.A. Dabaon, M.H. Boghdadi, and O. Kharoob.	Journal of Constructional Steel Research pp 1864-1875, /2009.	<p>An experimental investigation was made to study the behavior of space steel and composite semi-rigid joints. The effect of loading from the minor direction on the main direction of semi-rigid joints was considered. Five full-scale tests were performed on semi-rigid space steel and composite extended endplates joints. A three-dimensional finite element model is proposed using ANSYS software for the analytical investigation.</p> <p>A comparative study between the numerical model and experimental results is presented to establish the validity of the proposed model. Also, an application was made on space frame to show the effect of joint rigidity using a beam-element model and this was verified with previous studies.</p> <p>© 2009 published by Elsevier Ltd</p>
49	دليل السلامة والصحة المهنية وتأمين بيئة العمل	M.A. Dabaon.		"Book"
50	"Numerical Modelling for Stiffened and Unstiffened Stainless Steel Hollow Tubular Columns".	M.A. Dabaon, M.H. Boghdadi, and M.F. Hassanen.	13th ICSGE (Thirteenth international colloquium on structural and geotechnical Engineering), Ain Shams University,	This paper presents a numerical modeling for stainless steel stiffened and unstiffened hollow-section columns under uniform axial loads. The normal-strength austenitic stainless steel grade EN 1.4301 (304) was used. The main target was to investigate this type of columns in the constructure stage of concrete-filled stainless steel stiffened stub columns (before filling the columns with concrete). In these concrete-filled columns,

			Cairo, Egypt, December, 2009.	the stainless steel stiffened tubes were formed to increase the confinement effect of the concrete core. However, the stiffened sections were fabricated by welding four lipped angles or two lipped channels at the lips. Therefore, the stiffeners were formed at the mid-depth and mid-width of square sections and at the mid-depth of rectangular sections. The ABAQUS 606 program, as a finite element package, was used in this theoretical work. The numerical modeling was verified using the experimental results of stiffened and unstiffened stainless stub columns. To investigate the buckling behavior of the columns, the critical buckling load was predicted. The numerical modeling was expanded by a nonlinear analysis carried out on columns with imperfection, including initial geometrical imperfections and welding residual stresses.
51	"Effect of Width-to-Thickness Ratio of Tension Flange on the Behavior of Steel Plate Girder".	M.A. Dabaon, S.S. Seklla, A.A. Alrefaey.	m	Research results on the effect of the width-to-thickness ratio of the tension flange of plate girders on the behavior of this type of structural members are not available in the literature. In this study, an experimental program was carried out to study the effect of width-to-thickness ratio of tension flange on the behavior and ultimate strength of simply supported plate girders. The experimental program consisted of the ultimate testing of five simply-supported full-scale steel plate girders having the same span and steel profile but with different tension flange width-to-thickness ratios. A finite elements analysis was carried out to simulate the experimental study. A good agreement was observed between the experimental and finite element results. The experimental failure loads were also compared with the theoretical ultimate loads predicted using different codes of practice. It was found that that the width-to-thickness ratio of the tension flange does not have any significant effect on the behavior and ultimate strength of simply-supported plate girders. However, for plate girders made of compact compression flanges and un-stiffened slender webs, increasing the width-to-thickness ratio of the tension flange affects the uniformity of the stresses across the tension flange without affecting the ultimate strength. An inconsistency was observed among different codes of practice in estimating the ultimate strength of plate girders.
52	دليل السلامة والصحة المهنية وتأمين بيئة العمل	M.A. Dabaon.		"Book"
53	Fundamental of steel structure, LRFD.	M.A. Dabaon	2nd Edition, Tanta press, Nov., 2010.	"Book"

54	Shear buckling of plate girders with corrugated webs.	M. A. Dadaon, M. H. EL-Boghdadi, A. M. EL Hadidy.	Department of Structural Engineering, Faculty of Engineering, Tanta University, Tanta, Egypt.	<p>Due to the accordion effect, corrugated steel webs are only able to resist shear force. This web shear force can cause three different buckling modes: local, global and interactive shear buckling. Although several researchers have been investigation them. The shear bulking behavior of the corrugated webs has not yet been clearly explained specially for zigzag shape. This however leads to conservative buckling stress prediction. Therefore, an elastic bifurcation buckling analysis is carried out in this paper for zigzag corrugated webs by using ABAQUS computer package, The corrugated webs considered herein have practical dimensions similar to those of the available bridges with webs corrugated. The considered parametric study covers important factors; the corrugation depth, the web depth and the web thickness. The critical shear buckling stress of the corrugated webs obtained from the finite element analysis is compared with the available interactive shear buckling stresses formula. The results show that the available formula conservatively predicts the shear buckling stresses of zigzag corrugated webs with very high margin of safety. As a result of this research, a modification is made to the available interactive shear buckling stresses formula to provide more accurate results.</p>
55	Shear strength and behavior of steel plate girders with web openings.	M. A. Dadaon, A. M. EL Hadidy.	Department of Structural Engineering, Faculty of Engineering, Tanta University, Tanta, Egypt.	<p>The objective of this research is to deepen the shear behavior understanding of steel plate girders with web opening placed in the panel of the maximum shear and subjected to static loads until failure, Five experimental tests for simply supported full-scale girders are conducted to verify the finite element models. The theoretical investigation is carried out using the ABAQUS finite element package. Good agreement is obtained between the experimental and the finite element results in accordance with the deformation and ultimate loads. A parametric study is then conducted to cover the important factors (opening depth and flange thickness) affecting the shear strength and behavior of such girders. The evaluation of the current coded and specification shows that the current rules are conservative. Finally, a suggested design methods for the steel beams with web opening is proposed.</p>
56	Nonlinear behavior of built-up cold- formed steel section	Mohamed Dabaon, Ehab Ellobody, Khaled Ramzy.	<p>Faculty of Engineering, Tanta University, Tanta, Egypt.</p> <p>Journal of constructional steel Research 110(2015)16-28.</p>	<p>This paper discusses nonlinear behavior and design of built-up cold-formed steel section battened columns. The built-up columns were pin-ended and consisted of two cold-formed steel channels placed back- to- back and were connected using batten plates. Nonlinear 3-D finite element models were developed to simulate the structural performance of the axially loaded columns. The nonlinear material properties of flat and corner portions of the channels, initial geometric imperfections, actual geometries and boundary conditions were carefully considered in the models. The finite element models were verified against tests, recently conducted and reported by the authors, on the same form of construction. The column strengths, failure modes, deformed shapes at failure, load lateral displacement and load-axial strain relationships were predicted from the finite element analyses and compared well against the test results.</p>



				<p>In addition, the validated finite element models were used to perform an extensive parametric study investigating different parameters affecting the behavior of the columns comprising different slenderness, column length, cross-section geometries, steel strengths, spacing between channels and different batten plates spacing. Furthermore, the column strengths predicted in the parametric study were compared with design strengths calculated using the North American Specification, Australian/New Zealand and European code for cold-formed steel columns.</p>
57	<p>Experimental investigation of built-up cold- formed steel section battened columns.</p>	<p>Mohamed Dabaon, Ehab Ellobody, Khaled Ramzy.</p>	<p>Faculty of Engineering, Tanta University, Tanta, Egypt.</p> <p>Thin-Walled structures 92 (2015)137-145</p>	<p>This paper presents an experimental investigation on behavior and design of built-up cold-formed steel section battened columns. The built-up columns were pin-ended consisted of two cold-formed steel channels placed back-to-back at varied spacing of intersection. The two channels were connected batten plates, with varying longitudinal spacing. The cold-formed steel channel section were manufactured by brake-pressing flat strips having a plate thickness of 2mm. The built-up cold-formed steel section battened columns had different slenderness and geometries but had the same nominal length of 2200 mm. The column strengths, load-axial shortening, load-lateral displacement and load-axial strain relationships were measured in the tests. In addition, the failure modes and deformed shapes at failure were observed in the tests and reported in this paper. Overall, The built –up column tests provided valuable experimental data regarding the column behavior that compensated the lack of information on this form of construction as well as used to develop nonlinear 3-D finite element models.</p> <p>The column strengths measured experimentally were compared against design strengths calculated using the North American Specification, Australian/New Zealand Standard and European Code for cold formed steel columns. Generally, it is shown that the specifications were un conservative for the built-up cold-formed steel section battened columns failing mainly by local buckling, while the specifications were conservative for the built-up columns failing mainly by elastic flexural buckling.</p>
58	<p>Behaviour of high strength concrete composite slabs with different end anchorages.</p>	<p>Emad E. Etman, Mohamed Dabaon, Ahmed M. Taha.</p>		<p>This study is performed to investigate experimentally the behavior of steel deck composite slabs with different end anchorages. End anchorage as a type of shear connection for composite slabs plays an important role to prevent relative slip between concrete and steel deck. The presented composite slab specimens are made of high strength concrete and loaded at a specific shear span. Objectives of this study is to evaluate experimentally load carrying capacity, end slip, mode of failure, shear bond capacity, and the end anchorage contribution to the whole composite slab behavior.</p> <p>Research also presents a comparison between the experimental results and the theoretical results derived according to m-k and partial shear connection methods included in these standards (BS 5950-4: 1994, CSSBI S3-2003, and EC4 EN 1994-1-1:2004).</p>

59	Nonlinear finite element modeling of plate girders with zigzag corrugated webs.	M. A. Dadaon, M. H. EL-Boghdadi, A. M. EL Hadidy.	International Conference on Advances in Structural and Geotechnical Engineering. 6-9 April 2015, Hurghada, Egypt	<p>Nowadays, plate girders with corrugated webs (PGCWS) are mostly used in long span beams and bridges. These girders are composed of flat flange plates and corrugated web plates connected through continuous welding. However, the shear strength and behavior of PGCWs have not yet been clearly explained specially for zigzag corrugated webs (PGZCWs). The objective of this paper is, accordingly, to provide the shear strength and behavior of such girders. Finite element (FE) analysis is generated considering the realistic initial imperfection amplitudes. The ABAQUS software is used to construct a nonlinear FE analysis, including geometric and material nonlinearities, based on realistic dimensions of PGZCWs. To ensure the accuracy of the FE models, they are verified using available experimental results in literature.</p> <p>The available design shear strength formulas, found in the available data base, are proposed for the trapezoidal corrugated webs. However, new design strength for PGZCWs is proposed by using the interactive shear buckling strength formula as proposed by the current authors.</p>
60	FULL-SCALE EXPERIMENTAL TESTS ON THREE LATTICE STEEL TRANSMISSION TOWERS.	M. A. Dadaon, M. H. EL-Boghdadi, M.f. Hassanein and A.M. Taha.	International Conference on Advances in Structural and Geotechnical Engineering. 6-9 April 2015, Hurghada, Egypt	<p>Lattice steel transmission towers (LSTTS) are vital components of overhead transmission lines that play an important role in supporting the electrical power grids. This paper presents different types of failures observed during full-scale experimental testing on three LSTTs. The objective of this study is check the absolute towers capabilities and to identify the strength and safety of the steel towers under the design loads. The full-scale tests were performed at CELPI towers testing station – Bucharest – Romania. The three LSTTs were designed to carry 33 KV double circuits overhead transmission lines, the loading condition and design complied with the relevant requirements of the technical specification of ASCE-10/97. The structure design was performed using the software of power line system (PLS-TOWER) whereas the detailed design and drawings were performed using TEKLA STRUCTURE structural engineering software. The tests were performed in accordance with the requirements of the current version of IEC60652:2002-06 "Loading test on line towers". Observed Failures were studied and the reasons are discussed in details. As a result, the modifications for each tower were performed in order to enhance the performance to sustain loads and decrease the overall deflection.</p>

61	Investigate an Innovative Connection between R C Beam and steel Column.	A. H.EL-Masry, M. A. Dadaon, T.F. EL-Shafiey, Abd EL-Hakim A.Khalil.	Dubai UAE Apr 08-09,2015 17 (4) part XXIII	An experimental study was performed to investigate the behavior and strength of proposed technique to connect reinforced concrete (RC) beam to steel or composite columns. This approach can practically be used in several types of building construction. In this technique, The main beam of the frame consists of a transfer part (part of beam: Tr.p) and a common reinforcement concrete beam. The transfer part of the beam is connected to the column, whereas the rest of the beam is connected to the transfer part from each side. Four full-scale beam-column connections were tested under static loading. The test parameters were the length of the transfer part and the column properties. The test results show that using of the transfer part technique leads to modify the deformation capabilities for the RC beam and hence it increases its resistance against failure. Increase in length of the transfer part did not necessarily indicate an enhanced behavior. The test results contribute to the characterization of the connection behavior between RC beam-steel column and can be used to calibrate numerical models for the simulation of this type of connection.
62	Experimental Shear Resistance Evaluation of Ordinary and perfobond Y-Shaped Shear Connectors.	M. A. Dadaon, M. H. EL-Boghdadi, O.F. Kharoob, A.H. EL Gendy.	International Conference on Advances in Structural and Geotechnical Engineering, 6-9 April 2015, Hurghada, Egypt	Composite structures refer to two load carrying structural members that are integrally connected and deforming as a single unique unit using shear connectors. The use of connectors enhances the development of longitudinal shear forces at the steel-concrete interface. The objective of this research is to study the structural behavior of a proposed separated Y-shaped shear connector. The suggested investigated Y-shaped shear connector is intended to be an improvement to the structural response of the conventional perfobond shear connector. Accordingly, this paper carries out six push-out tests on the separated Y-shaped shear connector according to EC4. The experimental work was performed in the Reinforced Concrete and Heavy Structure Laboratory at the structural Engineering Department, Tanta University, Egypt. The key parameters affecting the behavior of the shear connector in the current investigation are the height, the thickness and the Y-shaping of the shear connector. Also, the effect of hole existence is investigated. Other parameters such as the length of the connector, the concrete strength and the slab geometry are kept the same for all specimens. Based on the performed tests, the results show that the proposed separated Y-shaped shear connector has higher shear resistance than that of the conventional perfobond shear connector. Also, the proposed connector shows better ductile behavior than the conventional perfobond connector. Moreover, results proved that increasing the connector thickness has a significant effect on the connector behavior by increasing its shear resistance. Furthermore, as the height of the connector increases, the shear capacity increases. Finally, from the presented results it is clarified that the proposed separated Y-shaped connector is better and more economical than the conventional perfobond connector.

63	<b>NEW TESTS ON BUILT-UP COLD-FORMED STEEL SECTION BATTENED COLUMNS.</b>	<b>Mohamed Dabaon, Ehab Ellobody, Khaled Ramzy.</b>	<b>International Conference on Advances in Structural and Geotechnical Engineering, 6-9 April 2015, Hurghada, Egypt</b>	<p>This paper presents the results of new tests conducted on built-up-formed steel section battened columns. The pin-ended columns were axially loaded and consisted of two cold-formed steel channels placed back-to-back at different center-to-center distances. The built-up columns had different geometries and different slenderness ratios. The column strengths, load-axial shortening, deformed shapes at failure, failure modes, load-lateral displacement and load-axial strain relationships were measured and observed in the tests. In overall, the experimental investigation aimed to provide sufficient test data for finite element models to be developed and to compensate the lack of the data on this form of construction. The test results have shown that the built-up cold-formed steel section battened columns offer a considerable increase in strength compared with single section columns provided that correct slenderness ratios were considered. It was also shown that the column slenderness and geometries have a considerable effect on the failure modes and load-displacement relationships. The columns strengths measured in the tests were compared with design strengths calculated using current codes of practice, with detailed discussions and conclusions.</p>
64	<b>NUMERICAL MODELLING OF BUILT-UP COLD-FORMED STEEL SECTION BATTENED COLUMNS</b>	<b>M.A. Dabaon, E.A. Ellobody, k.m. Ramzy.</b>	<b>International Conference on Advance in Structural and Geotechnical Engineering, 6-9 April 2015, Hurgada, Egypt.</b>	<p>This paper presents a nonlinear 3-D finite element model highlighting the structural performance and strength of built-up cold-formed steel section battened columns. The pin-ended columns were axially loaded and consisted of two cold-formed steel channels placed back-to-back at different center-to-center distances. The built-up columns had different geometries and different slenderness ratios. The nonlinear material properties of cold-formed steel, initial geometric imperfections and built-up section column component were considered in the finite element models. The finite element models were verified against tests conducted by the authors on the same form of construction. The column strengths, load-axial shortening, deformed shapes at failure, failure modes, load-lateral displacement and load-axial strain relationships were predicted from the finite element analysis and compared well against the test results. The verified finite element model was used to perform parametric studies investigating the effects of different parameters affecting the built-up column strength and behavior. The columns strengths predicted numerically were compared with design strengths calculated using current codes of practice. Based on the numerical results, new design rules were proposed for built-up cold-formed steel section (BCFS) battened columns.</p>