A NEW IDEA IN CONSTRUCTION WITH SOFTWARE USE AND RESEARCH DIRECTIONS

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Abstract

This paper provides an overview of the state of the art of evolutionary computation in civil engineering. First, it discusses the fundamentals of evolutionary computation in the context of a unified approach recently proposed by one of the authors. Second, it discusses the main research directions, including morphogenic design and co-evolutionary design. Next, it provides a description of the emerging evolutionary computation analysis, including an analysis in the context of complex adaptive systems and one based on the visualization of the gene pool and of the fitness function. Finally, the paper contains the conclusions and recommendations for the further research..

INTRODUCTION

The paper presents a fully meshless procedure fo solving partial differential equations. The approach termed generically the 'finite point method' is based on a weighted least square interpolation of point data and point collocation for evaluating the approximation integrals. Some examples showing the accuracy of the method for solution of adjoint and non-self adjoint equations typical of convective-diffusive transport and also to the analysis of compressible fluid mechanics problem are presented.

Domain integration by Gauss quadrature in the Galerkin mesh-free methods adds considerable complexity to solution procedures. Direct nodal integration, on the other hand, leads to a numerical instability due to under integration and vanishing derivatives of shape functions at the nodes. A strain smoothing stabilization for nodal integration is proposed to eliminate spatial instability in nodal integration. For convergence, an integration constraint (IC) is introduced as a necessary condition for a linear exactness in the mesh-free Galerkin approximation. The gradient matrix of strain smoothing is shown to satisfy IC using a divergence theorem. No numerical control parameter is involved in the proposed strain smoothing stabilization. The numerical results show that the accuracy and convergent rates in the mesh-free method with a direct nodal integration are improved considerably by the proposed stabilized conforming nodal integration method. It is also demonstrated that the Gauss integration method fails to meet IC in mesh-free discretization. For this reason the proposed method provides even better accuracy than Gauss integration for Galerkin mesh-free method as presented in several numerical examples. Copyright © 2001 John Wiley & Sons, Ltd.

First, the kinematics of the so-called solid-shell concept in analogy to the degenerated shell concept are introduced. Then several modifications of the solid-shell concept are proposed to obtain locking-free solid-shell elements, leading also to formulations which allow the use of general three-dimensional material laws and which are also able to represent the normal stresses and strains in thickness direction. Numerical analyses of geometrically linear and non-linear problems are finally performed using solely assumed natural shear strain elements with a linear approximation in in-plane direction.

It is shown that to satisfy the objectives of a reliable PBSD philosophy and procedure it is necessary to start with a multi-level seismic design criteria, to consider a probabilistic design approach, to consider local structural and non-

structural damage and therefore design spectra for buildings (*n* degrees of freedom), to take into account the cumulative damage, and to control not only displacements but also ductility (minimum strength) to limit damage. Finally, it is concluded that a transparent and conceptual comprehensive preliminary design approach is necessary. The model is linear and is based on modal analysis, but includes the modal coupling terms caused by high levels of damping in the isolation system. The equations are solved by a method that avoids complex modal analysis. Estimates of the important response quantities are obtained by the response spectrum method. It is shown that as the damping in the isolation system increases, the contribution of the modal coupling terms due to isolator damping in response to the superstructure becomes the dominant term. The isolator displacement and structural base shear may be reduced, but the floor accelerations and interstorey drift are increased. The results show that the use of supplemental dampers in seismic isolation is a misplaced effort and alternative strategies to solve the problem are suggested

In this paper, an elementary analysis based on a simple model of an isolated structure is used to demonstrate this dilemma. The model is linear and is based on modal analysis, but includes the modal coupling terms caused by high levels of damping in the isolation system. Estimates of the floor response quantities are obtained by the response spectrum method. It is shown that as the damping in the isolation system increases, the contribution of the modal coupling terms becomes the dominant term. The results show that the use of damping in seismic isolation when the purpose of the isolators is to protect sensitive internal equipment is a misplaced effort

The Indo-US Cross-National Dementia Epidemiology Study seeks to compare two rural populations, in the US and India: the Monongahela Valley, a rural community of relatively low socioeconomic status in southwestern Pennsylvania (USA), and Ballabgarh, a rural community near New Delhi in North India. Of Particular interest is the fact that the Ballabgarh elderly population is exclusively Hindi-speaking, has little or no education and is largely illiterate, rendering its cognitive screening a particular challenge. In this article we report methods and preliminary data on the development of a Hindi cognitive screening instrument suitable for the Ballabgarh elderly population. We use as an example our Hindi adaptation of the Mini-Mental State Examination (MMSE), a widely used global cognitive screening scale. Systematic, item-by-item, empirically based test development has shown that effective modifications can be made to existing tests that require reading and writing; and that culturally sensitive modifications can be made to render the test meaningful and relevant while still tapping the appropriate cognitive domains. Certain cognitive functions, particularly orientation to time, remain difficult to test adequately in this type of population. In Ballabgarh, as in the Monongahela Valley, educated individuals obtain higher test scores. Implications for dementia screening are discussed, including those relevant to the hypothesis that low education predisposes to dementia.

exchange information without using any preexisting fixed network infrastructure. This is a very important part of communication technology that supports truly pervasive computing, because in many context s information exchange between mobile units cannot rely on any fixed network infrastructure, but on rapid configuration of a wireless connections on The fly. Wireless ad hoc networks themselves are an independent, wide area of research and

applications, instead of being only just a complement of the cellular system.

A civil engineer is responsible for the proper drainage of a site, as well as the design of land mprovements, such as paving, curb and gutter design, retaining walls, and drainage culverts. Site plans prepared by the civil engineer indicate the existing and proposed grades of the land and the specific location of the facility on the land.

Structural Plans The structural plans are prepared by structural engineers and show the structural design of a building. These plans incorporate foundation planning with considerations for rain, snow, wind, earthquakes, and other natural phenomena. Structural engineers design the facility for both "live" and "dead" loads of the building. Live loads consist of the people, furniture, and other items that are not part of the building, but are supported by the building. Dead load is simply the weight of the building or structure itself. Electrical Plans Electrical plans are prepared by an electrical engineer, and show the electrical distribution system for the efficient distribution of power in a building. The plan design includes the distribution of electrical power from the utility company and the distribution to power-specific equipment. Engineering design factors for the overall electrical "load" of a building must also be considered (e.g., proper sizing and arrangement of transformers, panel boards, circuits, wires, conduits and power to the various machines, equipment and activities in the building). Electrical engineers may also handle the lighting design requirements of the building, as well as specialty areas such as a central security monitoring system, a computerized control system, and fire and smoke management systems.

Electrical plans are numbered with the prefix "E" for "electrical." Mechanical plans are prepared by a mechanical engineer to show the design of the various mechanical systems in the building. These systems must be designed to incorporate the proper air conditioning, heating, and ventilation equipment, as well as adequate plumbing, to meet the needs for all of the building's designated activities.

The most important findings of the survey are summarizedin the discussion below, supplemented by a series of tables. The demographic and work environment findings are discussed first, followed by the results pertaining to how the software is utilized. Finally, future research and software development issues are discussed.

Demographics and Work Environment

the demographic profile of the construction respondents as compared to the respondents of the full study. Over 50% of the construction respondents work in organizations with more than 1,000 employees (Fig. 1); most work in a project work environment, and perform project/ program management as their primary job function. Aside from project/ program management,

CONCLUSION

This article describes the fundamental issues and analyses key research problems of construction . Firstly, the background information of construction Is introduced, including the MANET concept, features, current status, and application areas. Then the main challenges of MANET are discussed that lead to the construction networking is one of the most important and essential technologies that support future pervasive computing scenario. The special

characters of MANET bring this technology gre at opportunities together with severe challenges. Currently MANET is becoming more and more interesting research topic and there are many research projects employed by academic and companies all over the world. Various interesting issues are investigated that cover all aspects of ad hoc wireless networks. Meanwhile, many routing protocols designed for ad hoc networks have been proposed as Internet Draft and RFC of IETF. MANETs can be exploited in a wide area of applications, from military, emergency rescue,law enforcement, commercial, to local and personal contexts

A new family of time integration algorithms is presented for solving structural dynamics problems. The new method, denoted as the generalized-α method, possesses numerical dissipation that can be controlled by the user. In particular, it is shown that the generalized-α method achieves high-frequency dissipation while minimizing unwanted low-frequency dissipation. Comparisons are given of the generalized-α method with other numerically dissipative time integration methods; these results highlight the improved performance of the new algorithm. The new algorithm can be easily implemented into programs that already include the Newmark and Hilber-Hughes-Taylor-α time integration methods.

References:

[1] M. Bellare, A. Desai, E. Jokipii, and P. Rogaway. A Concrete Security Treatment of Symmetric Encryption: Analysis of the DES Modes of Operation. Proceedings of the 38th Symposium on Foundations of Computer Science, IEEE, 1997.
[2] J.R. Douceur, A. Adya, W.J. Bolosky, D. Simon, and M. Theimer, „"Reclaiming Space from Duplicate Files in a Serverless Distributed File System, in Proc. ICDCS, 2002, pp. 617-624.
[3] W. J. Bolosky, J. R. Douceur, D. Ely, and M. Theimer, "Feasibility of a Serverless Distributed File System Deployed on an Existing Set of Desktop PCs", SIGMETRICS 2000, ACM, 2000, pp. 34-43.
[4] A. Adya, W. J. Bolosky, M. Castro, R. Chaiken, G. Cermak, J. R. Douceur, J. Howell, J. R. Lorch, M. Theimer, and R. Wattenhofer. FARSITE: Federated, available, and reliable storage for an incompletely trusted environment. In Proceedings of the 5th Symposium on Operating Systems Design and Implementation (OSDI), Boston, MA, Dec.2002. USENIX.
[5] J. R. Douceur, A. Adya, W. J. Bolosky, D. Simon, and M. Theimer. Reclaiming space from duplicate files in a serverless distributed file system. In Proceedings of the   22nd
[6] International Conference on Distributed Computing   Systems
[7] M.W. Storer, K. Greenan, D.D.E. Long, and E.L. Miller, „"Secure Data Deduplication, in Proc. StorageSS, 2008, pp. 1-10.
[8] A. Juels and B. S. Kaliski, Jr. Pors: proofs of retrievability for large files. In ACM CCS 7, pages 584–597. ACM, 2007
[9] H. Shacham and B. Waters. Compact proofs of retrievability. In ASIACRYPT 08, pages 90–107. Springer-Verlag, 2008. [10] Q. Wang, C. Wang, J. Li, K. Ren, and W. Lou. Enabling public verifiability and data dynamics for storage security in cloud computing. In ESORICS"09, pages 355–370. Springer-Verlag, 2009.
[11] G. Ateniese, R. Burns, R. Curtmola, J. Herring, L. Kissner, Z. Peterson, and D. Song. Provable data possession at untrusted stores. In ACM CCS "07, pages 598–609. ACM, 2007.
[12] G. Ateniese, R. Burns, R. Curtmola, J. Herring, L. Kissner, Z. Peterson, and D. Song. Provable data possession at untrusted stores. In ACM CCS "07, pages 598–609. ACM, 2007
[13] P. Anderson and L. Zhang, „"Fast and Secure Laptop Backupswith Encrypted De-Duplication, in Proc. USENIX LISA, 2010,pp. 1-8.
[14] M. Bellare, S. Keelveedhi, and T. Ristenpart, „"Message- Locked Encryption and Secure Deduplication, in Proc. IACR Cryptology ePrint Archive, 2012, pp. 296- 3122012:631.
[15] Bitcasa, ini_nite storage.

http://www.bitcasa.com/. (Cited on page 3.) [16] Ciphertite data backup. http://www.ciphertite.com/. (Cited on page 3.)
[17] A. Rahumed, H. Chen, Y. Tang, P. Lee, and J. Lui. A secure cloud backup system with assured deletion andversion control. In Parallel Processing Workshops (ICPPW), 2011 40th International Conference on, pages160-167 IEEE, 2011.
[18] Z. Wilcox-O'Hearn and B. Warner. Tahoe: The leastauthority _lesystem. In Proceedings of the 4th ACM international workshop on Storage security and survivability, pages 21-26. ACM, 2008.
[19] S. P. Vadhan. On constructing locally computable extractors and cryptosystems in the bounded storage model. In D. Boneh, editor, CRYPTO 2003, volume 2729 of LNCS, pages 61-77. Springer, Aug. 2003.
[20] A. Yun, C. Shi, and Y. Kim, „„On Protecting Integrity and Confidentiality of Cryptographic File System for Outsourced Storage, in Proc. ACM CCSW, Nov. 2009, pp. 67-76.
[21] M. Ben-Salem and S. J. Stolfo, "Modeling user searchbehavior for masquerade detection," in Proceedings of the 14th International Symposium on Recent Advances in Intrusion Detection . Heidelberg: Springer, September 2011, pp. 1–20.

[22] J. Pepitone, "Dropbox‟s password nightmare highlights cloud risks," June 2011.
[23] Salvatore J. Stolfo, Malek Ben Salem and Angelos D. Keromytis "Fog Computing: Mitigating Insider Data Theft Attacks in the Cloud" IEEE Symposium On Security And Privacy Workshop (SPW) YEAR 2012
[24] .Jin Li, Yan Kit Li, Xiaofeng Chen, Patrick P. C. Lee, Wenjing Lou" A Hybrid Cloud Approach for Secure Authorized Deduplication" IEEE Transactions On Parallel And Distributed System VOL:PP NO:99 YEAR 2013.
[25] I.Sudha1, A.Kannaki2, S.Jeevidha3" Alleviating Internal Data Theft Attacks by Decoy Technology in Cloud", International Journal of Computer Science and Mobile Computing, Vol.3 Issue.3, March- 2014, pg. 217-222. B. M. Bowen and S. Hershkop, "Decoy Document Distributor: http://sneakers.cs.columbia.edu/ids/fog/," 2009. [Online]. Available: http://sneakers.cs.columbia.edu/ids/FOG/
[26] Jin Li, Xiaofeng Chen, Mingqiang Li, Jingwei Li, Patrick P.C. Lee, and Wenjing Lou "Secure Deduplication with Efficient and Reliable Convergent Key Management" IEEE Transactions On Parallel And Distributed Systems, VOL. 25, NO. 6, JUNE 2014.