工學院演講資訊

陳乃綺 整理

3/06 (Thur) 14:00pm
興達電廠外海卸煤碼頭與聯絡棧橋工程設計及施工
陳吉紀董事長
宇泰工程顧問有限公司
工學院一樓視聽室

3/07 (Fri) 13:10pm
金融市場技術分析簡介
趙勝裕教授
海洋大學系統工程暨造船學系
系工系 103 教室

3/13 (Thur) 14:00PM
工程師的機會與能力培養
胡惠宇協理
美商傑明工程顧問(股)台灣分公司
工學院一樓視聽室

3/13 (Thur) 15:10PM
車用機油開發研究
盧高賢研究員
台灣中油煉製研究所產品研究組
人社院 BOH 201 遠距教室

3/14 (Fri) 13:10pm
多媒體聲控導航系統介紹
滕春霖總經理
台灣導航公司
系工系 103 教室

3/17 (Mon) 14:00PM
石延平教授講座
Galerkin and Collocation Meshfree Methods: from Continuum to Quantum
陳俊賢 校長講座教授
美國加州大學洛杉磯分校
工學院一樓視聽室

3/20 (Thur) 14:00PM
台灣混凝土科技之發展
張大鵬教授
台科大營建系
工學院一樓視聽室

3/27 (Thur) 14:00PM
海洋觀測及預報模式在防災上之應用
邱永芳主任
交通部運研所港灣技術研究中心
工學院一樓視聽室

石延平教授講座

講員：陳俊賢教授
地點：工學院一樓視聽室
時間：3月17日下午2:00
講題：Galerkin and Collcation Meshfree Methods: from Continuum to Quantum

摘要

Meshfree methods can be collectively classified as Galerkin type and collocation type. Galerkin type formulation in conjunction with approximation functions with polynomial reproductivity yields algebraic convergence. Through three classes of problems at continuum macro-scale, meso-scale, and quantum-scale, we demonstrate the convergence properties of Galerkin meshfree approach and how it can be constructed to alleviate the numerical difficulties associated with the standard finite element methods. The examples include large deformation and fragment impact problems, modeling of microstructure evolution, and solution of Schrodinger equation in quantum mechanics.

Alternatively, radial basis collocation method offers exponential convergence. However, the method is suffered from the large condition numbers due to its "nonlocal" approximation, and the nonlocality of radial basis function limits its application to small scale problems. In the second part of this talk, we show how to combine the advantages of radial basis function and reproducing kernel function to yield a local approximation that is better conditioned than that of the radial basis collocation method, while at the same time offers a higher rate of convergence than that of Galerkin type reproducing kernel method.

亞洲理工學院

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