



Weekly Seminar

Progress on Projective Truncation Approximation for Equation of Motion of Two-Time Green's Function

同宁华

中国人民大学物理系

Time: 3:00pm, Mar. 1, 2023 (Wednesday)

时间: 2023年3月1日 (周三) 下午3:00

Venue: Room w563, Physics building, Peking University

地点: 北京大学物理楼, 西563会议室

Abstract

In the equation of motion approach to the two-time Green's functions, conventional Tyablikov-type truncation of the chain of equations is rather arbitrary and apt to violate the analytical structure of Green's functions. We propose a practical way to truncate the equations of motion using operator projection. It guarantees the causality of Green's functions, fulfils the time translation invariance and the particle-hole symmetry, and is easy to implement in a computer. I report recent progress made in the development and application of this new method.

About the speaker

1997年毕业于复旦大学材料科学系；2002年在中国科学院物理研究所获得理学博士学位；2002-2005在德国奥格斯堡、科尔斯鲁厄大学做洪堡学者和博士后研究工作。2006至今在中国人民大学物理系任教。主要研究包括莫特相变、杂质量子相变等量子多体物理体系，着重发展量子多体数值方法，包括动力学平均场理论、数值重整化群、格林函数运动方程等。已发表学术论文50余篇。



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