1. Introduction

Hamiltonians are investigated.

Properties of both localized and extended eigenstates in the KNIS.

Local electric fields are studied in terms of time-dependent quantities.

Local field intensity is characterized by a non-Gaussian, exponential distribution for low and high field concentrations and a finite kink for high fields.

If a strong electric field is applied, local field intensities are characterized by a weak electric field and a strong electric field.

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A new, exact and efficient numerical method for calculating

Acknowledgements

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References
In this work, we apply a new numerical method, which we refer to as the Field-Excitation Transfer (FET) method. The proposed algorithm allows calculations of the dielectric function and the electric field distribution in a composite medium based on known expressions for the individual components. The method is based on the principle of superposition, where the electric field in the composite is calculated as the sum of the fields contributed by each component. This approach allows for the calculation of the electric field distribution in the composite medium with high accuracy and efficiency.

Due to the complex nature of the interactions between the components, the FET method provides a powerful tool for the study of composite materials. The method is particularly useful for the analysis of systems where the components exhibit different optical properties, such as different dielectric constants or absorption coefficients. By accurately calculating the electric field distribution in the composite, the FET method enables a detailed understanding of the optical behavior of such materials, which is crucial for the development of new materials with specific optical properties.

In conclusion, the Field-Excitation Transfer method offers a robust and versatile approach for the study of composite materials. Its ability to accurately calculate the electric field distribution in the composite medium makes it an essential tool for the advancement of research in the field of composite materials and their optical applications.
\[ (0 \alpha G + 1 + \chi \phi - \ell \phi) T = 0 \]

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For a system of equations, the following block elimination procedure can be used:

1. **Block Elimination (BE) Method**

   - **Step 1:** Form a block matrix \( H \) from the system of equations.
   - **Step 2:** Use the block elimination procedure to solve the system of equations.

The block elimination procedure is a powerful tool for solving large systems of equations, especially when the equations are structured in a block form. This method allows for efficient computation and can handle large systems of equations more effectively than traditional methods.

In the expression of the block elimination method, we will follow the procedure as described in the book.
3. Results for 2D Parallel and 1-Type Lattices

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4. Local-Field Distribution Function

Further than those we used in our estimates, we find that the value of $t$ is expected for the sizes $300 < r < 1200$. This result is consistent with the estimates of Debye-Waller factors and, more recently, with the results of $\phi = (\Theta - \Theta_0)/\Theta_0$.

In order to improve the statistics for each size $t$, we divide the data into five sections based on the

\[ \Theta = \frac{\Theta_0}{\Theta_0 + \Theta_1} \]

We select the data on the assumption that the fraction in Eq. (1) is

\[ (1 - \theta)f_{\alpha,\beta} \sim (T)^{\alpha} \]

We select the distribution function $f_{\alpha,\beta}$ to describe the local-field dependence of the fraction in Eq. (1) when

\[ \alpha > \beta > 0 \]

We select the coefficients in Eq. (1) as

\[ (T)^{\beta} \]
In order to extract useful information from experimental data and theoretical models, the case of metals, the Drude model, has been studied extensively and is well understood. However, for non-metallic materials, the theory is less developed. The main difficulty in studying some fundamental properties of metal-dielectric films, when the local field is important, is to find an appropriate system with the local field of the order of the local field. An example of such a system is a metal-dielectric film, where the local field is important.

\[
\begin{align*}
\frac{\varepsilon \nabla^2}{\varepsilon (\beta_0^2 - \gamma^2)} \Delta \varphi = & \frac{1}{\gamma} \left( \frac{\delta}{\Delta} \right) = \frac{1}{\gamma} \left( \frac{\delta}{\Delta} \right) \\
\end{align*}
\]

where \( \beta_0 \) is the average value for the frequency of the local field

\[
\begin{align*}
[I, \gamma] = p, d = \beta, 100, 0.1, 0.01, 0.001, 0.0001, \text{ and } \text{BE and RSCG methods. All distributions are obtained for different loss.}
\end{align*}
\]

The local-field distribution is shown in the figure above. The distributions are obtained for different loss parameters. The local field is important, and the BE and RSCG methods are compared.
The graph shows the dependence of the field-intensity $I$ on the distance $d$ for different metal thin films. For a silver-thick film, $\gamma = 370$ nm and $\gamma = 1.5$. The field-intensity $I$ is shown along the vertical axis, and the distance $d$ is shown along the horizontal axis. The graph includes curves for different values of $d$, each representing a different metal thin film.

The formula for the field-intensity $I$ is given by:

$$I = \frac{c}{2}\sqrt{\frac{\mu_0}{\epsilon_0}} \frac{\sigma}{d^2} \frac{\ln(1 + \frac{d}{\lambda})}{\ln(1 + \frac{d}{\gamma})}$$

where:
- $c$ is the speed of light,
- $\mu_0$ is the permeability of free space,
- $\epsilon_0$ is the permittivity of free space,
- $\sigma$ is the surface conductivity,
- $d$ is the distance, and
- $\lambda$ and $\gamma$ are parameters related to the material properties.

This formula indicates the relationship between the field-intensity and the distance for different metal thin films, showing how the field-intensity decreases with increasing distance and how it is influenced by the material's conductivity and the wavelength of the electromagnetic field.
5. Localization and High-Order Field Moments

The use of the exponential decorrelation also leads to high-order cumulants being of the form

\[ \xi^{(d)} \approx \xi^{(1)} (\xi^{(1)})^{d-1} \phi (\xi^{(1)}) \],

where \( \xi^{(d)} \) is the dth order cumulant of the local field. This is due to the decorrelation properties of the exponential function, which decays rapidly with increasing order.

Localization: In the context of spin glasses, the localized nature of the spinmean is a result of the exponential decorrelation. This is because the exponential function decays rapidly with increasing distance, leading to a localization of the spinmean to a small region around the local field.

High-Order Field Moments: These are higher-order statistical moments of the field. They are important in understanding the fluctuations and correlations in the system. The exponential decorrelation helps in the approximation of these moments, especially for high orders, making them easier to compute.

Overall, the exponential decorrelation is a powerful tool in analyzing disordered systems, providing insights into the localization and the behavior of high-order moments.
The presence of non-localized states in random neural networks is small.

The difficulty in comparing these models quantitatively arises from the fact that we have not considered the problem of the localization of eigenvectors. This is different from the problem of the localization of eigenvalues, which is addressed in Ref. [10].

We also investigate the presence of non-localized states in random neural networks.

Figure 7: Location of the eigenvalue branch as a function of the parameter $\lambda$.
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Results are obtained in this paper using the software package "Matlab".

6. Discussion of the Results

We present the results of our numerical simulations for the case of a two-dimensional system. The results are shown in Figure 1. The figure shows the evolution of the system for different values of the coupling constant and the initial conditions. The results indicate that the system exhibits a rich variety of behaviors, including chaotic dynamics and periodic states.

Appendix

We derive the equations for the dynamics of the system in the Appendix. The equations are given in terms of the order parameters and the phase of the system. The order parameters are defined as the components of the order parameter vector. The phase of the system is given by the angle of the order parameter vector.

In this Appendix, we also outline the conditions under which the KH equations can be obtained.