

Numerical Methods of Mathematical Physics (2019)

1. Main problems of the numerical solution of IBVPs for PDEs and main definitions.
2. Method of the canonical grid operators.
3. Integro-interpolation method.
4. Method of the undetermined coefficients.
5. The von Neumann method.
6. The maximum principle.
7. Dispersive relation for the explicit FD scheme for LAE.
8. First differential approximation.
9. FD scheme for LWE.
10. FD schemes for LHE in 1D case.
11. FD schemes for LHE in 2D case.
12. The splitting scheme.
13. Alternating direction method.
14. FD scheme for the Poisson equation.