

# Communications in Mathematical Physics

Volume 121 Number 1 1989

B. Booss-Bavnbek,  
K. P. Wojciechowski

Y.-G. Oh

Pseudo-Differential Projections and the Topology of Certain  
Spaces of Elliptic Boundary Value Problems 1

Stability of Semiclassical Bound States of Nonlinear  
Schrödinger Equations with Potentials 11

E. Y. Lerner, M. D. Missarov

G. Auberson, G. Mennessier

$P$ -Adic Feynman and String Amplitudes 35

Analytic Extrapolation in  $L^\infty$ -Norm: An Alternative Approach  
to "QCD Sum Rules" 49

Ding Xiayi, Chen Gui-Qiang,  
Luo Peizhu

Convergence of the Fractional Step Lax-Friedrichs Scheme  
and Godunov Scheme for the Isentropic System of Gas  
Dynamics 63

H. Garland, M. K. Murray

R. Fernández, J. Slawny

Why Instantons are Monopoles 85

Inequalities and Many Phase Transitions in Ferromagnetic  
Systems 91

G. Toscani

On the Cauchy Problem for the Discrete Boltzmann Equation  
with Initial Values in  $L_+^1(\mathbb{R})$  121

R. Illner, M. Pulvirenti

Global Validity of the Boltzmann Equation for Two- and  
Three-Dimensional Rare Gas in Vacuum: Erratum and  
Improved Result 143

J.-P. Eckmann, C. E. Wayne

The Largest Liapunov Exponent for Random Matrices and  
Directed Polymers in a Random Environment 147

Indexed in *Current Contents*

Evaluated and abstracted for *PHYS* on *STN*



Springer International