# Contents

**Vol. 45, No. 6, 2009**

Simultaneous English language translation of the journal is available from Allerton Press, Inc.,

Distributed worldwide by Springer. *Optoelectronics, Instrumentation and Data Processing* ISSN 8756-6990.

**Analysis and Synthesis of Signals and Images**

Model of a Hierarchical System of Invariant Characteristics of Image Description
*I. V. Razin* 491

Quasioptimal Control of Multielement Antenna Arrays
*P. N. Bashly, Yu. A. Kuznetsov, and S. G. Gladushenko* 501

GPU Processing of Particle System Animation
*D. A. Gladkiy, I. V. Belago, N. A. Elykov, and S. A. Kuzikowski* 507

Filtering in Linear Discrete Systems with Unknown Perturbations
*S. V. Smagin* 513

Document Analysis Technology in Information Systems for Supporting Research and Commercial Activities
*Yu. A. Zagorulko and E. A. Sidorova* 520

Estimate of the Effect of Antidepressants in the Forced Swimming Test
*V. A. Kulikov, A. V. Kulikov, M. A. Tikhonova, and V. S. Kirichuk* 526

Signal Processing in Laser Triangulation Sensors for Geometric Parameters of Moving Objects
*V. V. Sotnikov* 531

**Physical and Engineering Fundamentals of Microelectronics and Optoelectronics**

Distributed Fiber-Optic System for Measuring Stress–Strain States of a Plate
*Yu. N. Kul'chin and B. S. Notkin* 539

Inverse Scattering Problem for the Wave Equation in a One-Dimensional Inhomogeneous Medium
*O. V. Belai, E. V. Podivilov, L. L. Frumin, and D. A. Shapiro* 546

Acoustooptic Methods for Measuring Sound Velocity
*S. V. Bogdanov and V. K. Sapozhnikov* 554

Multiple-Beam Interferometers in Reflected Light with a "Non-Inverted"Response Function
*V. S. Terentiev* 563

Calculation of the Reflection Coefficient of Metal–Dielectric Structures in Frustrated Total Internal Reflection
*N. D. Goldina* 571

Power Estimation Methods in Digital Circuit Design
*T. Grzes, V. Salauyou, and I. Bulatova* 576

**Brief Communication**

Experimental Study of Gravitational Disturbances during Solar Eclipses in the Novosibirsk Region
*G. P. Arnautov, E. N. Kalish, Yu. F. Stus, M. G. Smirnov, I. A. Bunin, and D. A. Nosov* 584

On-Line Testing of Flip-Chip Assemblies
*A. R. Novoselov and I. G. Kosulina* 587

Author Index to Volume 45, 2009 590

Contents of Volume 45, 2009 593