

CONTENTS

Preface	v
Acknowledgements	ix
Contents	xi
I. Elliott W. Montroll (May 4, 1916–December 3, 1983) <i>M.F. Shlesinger and G.H. Weiss</i>	1
II. List of Publications of Elliott W. Montroll	17
III. Invited Contributions	29
Ch. 1. Dielectric relaxation via the Montroll–Weiss random walk of defects <i>John T. Bendler and Michael F. Shlesinger</i>	31
Ch. 2. The fascination of old texts <i>Cyril Domb</i>	47
Ch. 3. Some statistical and dynamical problems in quantum electronics <i>F.T. Hioe</i>	75
Ch. 4. Theory of diffusion via an interstitial and vacancy mechanism <i>Paul H.E. Meijer</i>	99
Ch. 5. Mathieu difference equations <i>Renfrey B. Potts</i>	111
Ch. 6. Mayer–Montroll equations (and some variants) through history for fun and profit <i>G. Stell</i>	127

Ch. 7. Illumination in a random medium <i>N.G. van Kampen</i>	157
Ch. 8. Random walks in crystallography <i>George H. Weiss and James E. Kiefer</i>	169
Ch. 9. On the quantum Langevin equation: The linear oscillator <i>Bruce J. West and Katja Lindenberg</i>	189
Ch. 10. Some inequalities for anisotropic rotators <i>J. Bricmont, J.L. Lebowitz and C.E. Pfister</i>	205
IV. Reprints of Elliott W. Montroll	215
Some Notes and Applications of the Characteristic Value Theory of Integral Equations, Abstract of a Doctor's Dissertation <i>University of Pittsburgh Bulletin</i> , Vol. 37 (1941) No. 3, Jan. 15.	217
With J.E. Mayer, Statistical Mechanics of Imperfect Gases <i>J. Chem. Phys.</i> 9 (1941) 626–637.	223
On the Theory of Markoff Chains <i>Ann. Math. Stat.</i> 28 (1947) 18–36.	235
Frequency Spectrum of Crystalline Solids <i>J. Chem. Phys.</i> 10 (1942) 218–229.	238
With R.B. Potts, Effect of Defects on Lattice Vibrations: Interaction of Defects and an Analogy with Meson Pair Theory <i>Phys. Rev.</i> 102 (1956) 72–84.	266
With P. Mazur, Poincaré Cycles, Ergodicity, and Irreversibility in Assemblies of Coupled Harmonic Oscillators <i>J. Math. Phys.</i> 1 (1960) 70–84.	279
With K.E. Shuler, Studies in Nonequilibrium Rate Processes. I: The Relaxation of a System of Harmonic Oscillators <i>J. Chem. Phys.</i> 26 (1957) 454–464.	294
With G.H. Weiss, Random Walks on Lattices. II <i>J. Math. Phys.</i> 6 (1965) 167–181.	305
With V.M. Kenkre and M.F. Shlesinger, Generalized Master Equations for Continuous-Time Random Walks <i>J. Stat. Phys.</i> 9 (1973) 45–50.	320
With H. Scher, Anomalous transit-time dispersion in amorphous solids <i>Phys. Rev. B12</i> (1975) 2455–2477.	326

With R.E. Chandler and R. Herman, Traffic Dynamics: Studies in Car Following <i>Operations Research</i> 6 (1958) 165–184.	349
Social dynamics and the quantifying of social forces <i>Proc. Nat. Acad. Sci. (USA)</i> 75 (1978) 4633–4637.	369
Contents of Volumes I–XII	375
Cumulative Index, Volumes VI–XII	379