

## SUBJECT INDEX

- adjoint map 102
  - operator 98
- algebra, Banach 45, 47, 98
  - , Cuntz 117
  - , division 45
  - , uniform 48
- applications of currents 105
- basis, Haar 124, 127–129
  - , Schauder 116, 120, 122–124, 129
  - , Weierstraß 122
- Centrum, Steinhaus [Centrum Steinhausa] 43
- chaotic dynamical system 137
- comass related to a distributions space as a semi-norm 103
- continuity of a multiplicative functional 49
  - of an inverse mapping 48
- convergence, modular 43
- cryptology 56–59, 63, 64
- current 97, 102–104
  - , locally rectifiable 104
- derivation for distributions 101
  - on a fractal set 130
  - on a self-similar fractal set 131
- derivative, Radon-Nikodym 120
- dimension, Hausdorff 117, 119
- distribution 97, 101
  - as a current of dimension 0 103
- dual norm 98
  - , topological 98–99
- dynamical system of a fractal set 137
- encryption machine Enigma 59, 63, 64
- exterior differential of a current 103
- fluctuation 116, 135, 138
  - mapping 116, 135, 138
- foundations of mathematics in Lvov 27–44
- fractal set, of flower type 119
  - —, self-similar 117
  - —, — of Cantor type 118
- function, continued 89
- functional analysis in Lvov 45–51
- gasket, Sierpiński 116
- holomorphic chain as a current 105
- Hurwitz pair 138, 140
- inductive limit 101
  - —, strict 101
- integration current 104
- invariant, Kakutani-Jørgensen 120
- isomorphism of Banach algebras 47
- local convexity for topological vector spaces 100
- logic in Lvov 27–44
- mass related to a distribution space as a semi-norm 103
  - topology 104
- measure as a current of dimension 0 (distribution), of order 0 103
  - , Hausdorff 118, 119

- Medal of Distinction, Orlicz 77
- multiplicative map of a Banach space 47
- multiplicity of continuous mappings
  - of domains 110, 114
- multivalued mappings,  $n$ -admissible 109, 114
- noncommutative embedding of derivations 116
  - isomorphism 136
- norm, Luxemburg-Nakano 72
  - , Orlicz 72
- number theory in Lvov 87–89
- philosophy in Lvov 28–30, 37, 38
- problem of Michael(-Mazur) 50
- Problem 56 in the Scottish book; positive answer 83–84
- quaternion 45–47, 89
- Scottish book 22, 24, 67, 80, 83, 108
  - , New 108
- Scottish café 22, 66–67, 93, 108
- set theory in Lvov 87–89
- soliton techniques in Lvov 81, 84
- space, Banach 47, 98
  - , Musielak-Orlicz 74
  - , Nikodym 99, 105
  - , Orlicz 65, 66, 71, 72, 74
  - , Saks 70, 72
  - , Sobolev 99
- spectral singularity 80
  - theory of linear operators in Lvov 80–82
- spectrality for the Schrödinger and Dirac operators 81, 84
- stochastic dimension 138
- theorem, F. Riesz representation 98
  - , Hausdorff-Besicovitch 119
  - of Orlicz on unconditional convergence in  $L^p$  74
  - of Orlicz and Pettis 74
  - of Weierstraß 48–51
  - — —, generalized 48–51
- topological algebras in Lvov 45–51
- wavelet expansion on a fractal set 129, 138–139