Contents

Preface v

1 Introduction 1
by Athanase Papadopoulos

2 Café conversations 29
by Athanase Papadopoulos

3 Learning about dynamics, Kleinian groups, quasiconformality, and period doubling universality: Orsay Chapter 53
by Dennis Sullivan

4 My mathematical world 61
by Valentin Poénaru

5 Le Diable, le Bon Dieu et la Sphère Dimension *n* 67
by Alexey Sossinsky

6 Super Hyperbolic Law of Cosines: same formula with different content 73
by Robert Penner

7 The topological types of length bounded multicurves 97
by Hugo Parlier

8 A recipe for the dilatation of families of pseudo-Anosov braids 111
by Saadet Öykü Yurttaş

9 ℓ^2-stability and homomorphisms into the mapping class group 127
by Marc Burger and Alessandra Iozzi

10 Heisenberg homology of ribbon graphs 141
by Christian Blanchet

11 Quasicircles and Dirichlet finite harmonic functions on Riemann surfaces 155
by Hiroshige Shiga

12 Universal degeneration of Riemann surfaces and fibered complex surfaces 179
by Tadashi Ashikaga and Yukio Matsumoto

13 Surface bundles in 3-dimensional topology 263
by Ken'ichi Ohshika

14 The complex of incompressible surfaces of a handlebody 291
by Charalampos Charitos

15 Reversibility and real adjoint orbits of linear maps 313
by Krishnendu Gongopadhyay, Tejbir Lohan, and Chandan Maity

16 Invariant Seifert surfaces for strongly invertible knots 325
by Mikami Hirasawa, Ryota Hiura, and Makoto Sakuma

17 Minor theory for quasipositive surfaces 351
by Sebastian Baader, Pierre Dehornoy, and Livio Liechti

18 The Alexander polynomial as a universal invariant 359
by Rinat Kashaev

19 Alexander polynomials and signatures of some high-dimensional knots 377
by Eva Bayer-Fluckiger

20 Refined Bobtcheva–Messia invariants of 4-dimensional 2-handlebodies 387
by Anna Beliakova and Marco De Renzi

21 Conic singularities and immediate transversality 433
by François Laudenbach

22 Honda–Huang's work on contact convexity revisited 453
by Yakov Eliashberg and Dishant M. Pancholi

23 Rambling around the Milnor fiber 493
by François Loeser

24 Singular fibrations over surfaces 515
by Louis Funar

25 Presentation of the fundamental groups of complements of shadows . . 557
by Masaharu Ishikawa, Yuya Koda, and Hironobu Naoe

26 A'Campo type equations and integrals with respect to the Euler characteristic 589
by Sabir M. Gusein-Zade

27 Almost non-degenerate functions and a Zariski pair of links 601
by Mutsuo Oka

28 The Milnor fiber conjecture of Neumann and Wahl, and an overview of its proof 629
by Maria Angelica Cueto, Patrick Popescu-Pampu, and Dmitry Stepanov

29 Singularities and clusters 711
by Vladimir V. Fock

30 Deformations of Lebesgue's measure on the boundary of the Farey tree 723
by İsmail Özkaraca and Muhammed Uludağ

31 Birational maps and Nori motives 761
by Noémie C. Combe, Yuri I. Manin, and Matilde Marcolli

32 Dwork-type congruences and p-adic KZ connection 781
by Alexander Varchenko

33 Temperley–Lieb–Jones category and the space of conformal blocks . . 813
by Toshitake Kohno

34 Timelike Hilbert geometry of the spherical simplex 847
by Athanase Papadopoulos and Sumio Yamada

35 The single intuition of a move of time 871
by Victor Pambuccian

36 Continuity and discontinuity in, and between, mathematics and physics 883
by Arkady Plotnitsky

37 Zeno's arguments and paradoxes are *not against* motion and multiplicity *but for* the separation of true Beings from sensibles 949
by Stelios Negrepontis

List of contributors 999

Index 1005