

**PREFACE BY THE EDITORS FOR THE SPECIAL ISSUE  
“GEOMETRIC SINGULARITY THEORY”**

*dedicated to Peter Giblin on his 70<sup>th</sup> birthday  
and Stanisław Janeczko on his 60<sup>th</sup> birthday*

The workshop “Geometric Singularity Theory” was the eighth workshop in a sequence started in 2001 as the Polish-Japanese Singularity Theory Working Days. During the workshop, we celebrated the 60<sup>th</sup> birthday of Stanisław Janeczko, who was the creator of the whole sequence of the workshops and the 70<sup>th</sup> birthday of his friend and collaborator Peter Giblin. Both, Peter Giblin and Stanisław Janeczko are the leaders of our group on geometric singularity theory, symplectic singularity theory and its applications to geometry, mathematical physics, computer vision and computer graphics. We include below biographical notes on Peter Giblin and Stanisław Janeczko written by their former students, Bill Bruce and Wojciech Domitrz.

The plenary lectures of the workshop were as follows:

Goo Ishikawa, *The work of S. Janeczko and history of Polish-Japanese singularity theory working days*

Michail Zhitomirskii, *Homogeneous subsets of the tangent bundle*

Shyuichi Izumiya, *Flat approximations of surfaces along curves*

Zbigniew Jelonek, *My cooperation with Staszek*

Sergey Agafonov, *On symmetries of singular implicit ODEs*

Zbigniew Szafraniec, *Mappings from  $\mathbb{R}^3$  to  $\mathbb{R}^3$  and swallowtails*

Konstantinos Kourliouros, *Singularities of functions on manifolds with boundary and volume forms*

Vincent Grandjean, *Tame bi-Lipschitz contact equivalence of tame functions*  
Federico Sanchez-Bringas, *Isometric reduction of codimension of submanifolds*

*in space forms*

Naohiko Kasuya, *On codimension two contact embeddings*

Stanisław Janeczko, *Peter’s generic geometry*

Maria Aparecida Soares Ruas, *Singularities of affine equidistants and extrinsic geometry of surfaces in 4-space*

Goo Ishikawa, *Singular path duality for Cartan distributions from geometric control theory*

Marcos Craizer, *Singularities of even dimensional improper affine spheres*

Miriam Manoel, *Normal forms of reversible equivariant mappings*

Takashi Nishimura, *Topological aspect of Wulff shapes*

Maria Michalska, *Bounded polynomials*

Kentaro Saji, *Geometric invariants of cuspidal edges*

Ewa Stróżyna, *The complete formal normal form for the Bogdanov–Takens singularity*

Piotr Mormul, *The Goursat Monster Tower: explicit formulas for the Puiseux characteristics which label the strata*

Masatomo Takahashi, *Evolutes and involutes of fronts in the Euclidean plane*

Marcelo Saia, *Topological classification of co-rank two complex map germs from the plane to the plane*

Mutsuo Oka, *Mixed hypersurface with strongly polar weighted homogeneous faces*

Andrzej Weber, *Equivariant characteristic classes of singular varieties*

Marcin Bilski, *Approximation of holomorphic maps into singular varieties*

Handan Yıldırım, *Contacts of spacelike hypersurfaces in De Sitter space with  $\varphi$ -hyperbolic flat hyperquadrics*

Wataru Yukuno, *Generic properties of singular trajectories on polynomial control affine system*

The cultural programme included a visit of the workshop participants to an exhibition of prints by Hiroshige *Fifty three stations of the Tōkaidō* held in the Center for Advanced Studies of Warsaw University of Technology.

## Scientific Committee

- Wojciech Domitrz
- Arkadiusz Płoski
- Takuo Fukuda
- Carmen Romero-Fuster
- Peter Giblin
- Marcelo Saia
- Goo Ishikawa
- Maria Aparecida Soares Ruas
- Shyuichi Izumiya
- Zbigniew Szafraniec
- Stanisław Janeczko
- Farid Tari
- Zbigniew Jelonek
- Bronisław Wajnryb
- Tadeusz Mostowski
- Keizo Yamaguchi
- Wiesław Pawłucki

## Organizing Committee

- Wojciech Domitrz
- Goo Ishikawa
- Shyuichi Izumiya
- Ewa Stróżyna
- Żaneta Trębska
- Mariusz Zająć
- Michał Zwierzyński

## List of participants

- Janusz Adamus
- Sergey Agafonov
- Zofia Ambroży
- Hassan Babiker
- Barbosa Camilo
- Marcin Bilski
- Liang Chen
- Marcos Craizer
- Wojciech Domitrz
- Christophe Eyral
- Takuo Fukuda
- Alexandre Fernandes
- Peter Giblin
- Vincent Grandjean
- Goo Ishikawa
- Yoshiki Izumikawa
- Shyuichi Izumiya
- Stanisław Janeczko
- Zbigniew Jelonek
- Piotr Karwasz
- Naohiko Kasuya
- Atsuko Katanaga
- Konstantinos Kourliouros
- Fausto Lira
- Łukasz Maciejewski
- Manoel Miriam
- Maria Michalska
- Małgorzata Mikosz
- Yusuke Mizota
- Piotr Mormul
- Tadeusz Mostowski
- Takashi Nishimura
- Aleksandra Nowel
- Mutsuo Oka
- Maria del Carmen Romero Fuster
- Maria Aparecida Soares Ruas
- Marcelo Saia
- Kentaro Saji
- Federico Sanchez-Bringas
- Ewa Stróżyna
- Piotr Suwara
- Zbigniew Szafraniec
- Masatomo Takahashi
- Żaneta Trębska
- Asahi Tsuchida
- Ricardo Uribe-Vargas
- Bronisław Wajnryb
- Andrzej Weber
- Keizo Yamaguchi
- Handan Yildirim
- Wataru Yukuno
- Mariusz Zająć
- Michail Zhitomirskii
- Michał Zwierzyński

We thank all members of the scientific committee for their contribution to the high scientific standards of the workshop. Special thanks are due to Ewa Stróżyna, Żaneta Trębska, Mariusz Zająć and Michał Zwierzyński for excellent organizational work.



Participants of the conference “Geometric Singularity Theory” held in Warsaw, 24–31 Aug, 2013.

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We are also grateful to Bill Bruce for writing Peter's biographical note and the managing editor of *Demonstratio Mathematica* Tomasz Traczyk for his help in publishing this volume.

*Wojciech Domitrz  
Goo Ishikawa  
Shyuichi Izumiya*