## The Third Pan-Pacific International Conference on

## **Topology and Applications**

# November 8-13, 2019 Chengdu, People's Republic of China

Conference Schedule (Session-by-Session)

November 8	Arrival and Registration
10:00 – 17:00	Registration Xiangyu Hotel
18:00 - 19:00	Dinner
19:30	Joint Meeting of International and Local Committees
	Xiangyu Hotel
November 9	
8:00 - 8:30	Registration continued
	Xiangyu Hotel
<mark>8:30 – 9:00</mark>	<b>Open Ceremony</b>
	Xiangyu Hotel

#### **Plenary Session**

#### November 9, 9:00 – 10:35

#### Large Room: Plenary Talk(1)

9:00 - 9:45	Floer cohomology and covering spaces
Chair: Sergey Antonyan	Kaoru Ono
9:50 - 10:35	Stability patterns in algebra and topology
Chair: Daniel Juan Pineda	Rita Jiménez Rolland

#### November 9, 11:30 – 12:15

## Large Room: Plenary Talk (2)

11:30 - 12:15	Topology and topological sequence entropy
Chair: Weinian Zhang	Xiangdong Ye

## November 12, 14:30 – 16:15

## Large Room: Plenary Talk (3)

14:30 - 15:15	Cardinal invariants and forcing theory
Chair: Shuguo Zhang	Jörg Brendle
15:20 - 16:05	Enriched Priestley spaces
Chair: Dexue Zhang	Dirk Hofmann

## November 12, 16:30 – 16:05

#### Large Room: Plenary Talk (4)

16:30 - 17:15	Embedding the symmetries of surfaces and graphs to those of
Chair: Sang You Lee	3-sphere
	Shicheng Wang
17:20 - 18:05	Connectedness properties of the Higson corona of the half line
Chair: Salvador Garcia-	Takamitsu Yamauchi
Ferreira	

## Algebraic Topology Session

#### November 9

## Room 2: Algebraic Topology (1)

Chair: Daisuke Kishimoto

14:30 - 15:05	The non-triviality of the labeled open-closed TQFT associated with string topology for classifying spaces
	Katsuhiko Kuribayashi
15:10 - 15:35	Topology of real toric manifolds and its application
	Suyoung Choi
15:40 - 16:05	Uniruleness of symplectic birational geometry on orbifolds
	Chengyong Du

## Room 2: Algebraic Topology (2)

Chair: Katsuhiko Kuribayashi

16:40 - 17:15	Relative phantom maps
	Takahiro Matsushita
17:20 - 17:45	Representation theory of internal categories and its application to
	comodules over Hopf algebroids
	Atsushi Yamaguchi
17:50 - 18:15	Self closedness numbers and self-lengths of certain monoids of self-
	maps
	Ho Won Choi

## November 11

#### Room 2: Algebraic Topology (3)

Chair: Takahiro Matsushita

Chan: Takamo Matsushta	
8:30 - 9:05	Moduli space of Kapustin-Witten equations on a closed 4-manifold
	Teng Huang
9:10 - 9:35	Upper bound for monoidal topological complexity
	Norio Iwase
9:35 - 10:00	String <sup>c</sup> structures and modular invariants
	Ruizhi Huang

## Room 2: Algebraic Topology (4)

Chair: Teng Huang

10:30 - 11:05	On the Borel conjecture for Alexandrov spaces
	Noe Barcenas
11:10 - 11:35	Moduli spaces of Higgs bundles and hyper Kähler metrics
	Zhenxi Huang
11:40 - 12:05	Free cyclic group actions on (n-1)-connected 2n-manifolds
	Jianqiang Yang

# Room 2: Algebraic Topology (5)

Chair: Bai-ling Wang	
14:30 - 15:05	Higher homotopy associativity in the Harris decomposition of Lie
	groups
	Daisuke Kishimoto
15:10 - 15:35	On nil groups for the quaternion group
	Daniel Juan Pineda
15:40 - 16:05	On the cohomology of Coxeter groups and related groups
	Toshiyuki Akita

#### Room 2: Algebraic Topology (6)

Chair: Daniel Juan Pineda	
16:30 - 17:05	On Fano and weak Fano regular Hessenberg varieties
	Haozhi Zeng
17:10 - 17:35	Converse of Smith theory
	Min Yan
17:35 - 18:00	Some applications of topological vertex algorithm
	Xiaobin Li

## General and Set-theoretic Topology Session

#### November 9

## **Room 3: General and Set-theoretic Topology (1)**

Chair: Angel Tamariz-Mascarua

14:30 - 15:05	Usco selections and Choquet-completeness
	Valentin Gutev
15:05 - 15:40	On the hyperspace of non-trivial convergent sequences
	Salvador Garcia-Ferreira
15:45 - 16:10	Three results independent of ZFC for certain products
	Yukinobu Yajima

#### November 10

#### **Room 3: General and Set-theoretic Topology (2)**

Chair: Mikhail Tkachenko

8:30 - 9:05	Some recent progress on the study of gaps in the lattice of topological
	group topologies on a group
	Wei He
9:10 - 9:35	The progresses of PT-groups and Dieudonné completion of
	paratopological groups
	Li-Hong Xie
9:40 - 10:05	Topological groups with a property of Dierolf and Warken
	Victor Hugo Yañez

## Room 3: General and Set-theoretic Topology (3)

Chair: Manuel Sanchis

10:30 - 11:05	Factoring continuous homomorphisms defined on subgroups of
	topological products
	Mikhail Tkachenko
11:05 - 11:40	A new class of topological groups containing all Polish groups and all
	minimal groups
	Dmitri Shakhmatov
11:45 - 12:10	A note on paratopological groups with an $\omega^{\omega}$ -base
	Zhangyong Cai

## Room 3: General and Set-theoretic Topology (4)

Chair: Alejandro Illanes

14:30 - 15:05	The inverse limit nonautonomous dynamical system
	Manuel Sanchis
15:10 - 15:35	On quasi-continuous dynamical systems
	Jiling Cao
15:40 - 16:05	The hyperspace of ω-limit sets
	Jorge M. Martinez-Montejano

## Room 3: General and Set-theoretic Topology (5)

Chair: Valentin Gutev	
16:30 - 17:05	Topological mixing and UPE
	Verónica Martínez de la Vega
17:05 - 17:30	Means on continua
	Jimmy A. Naranjo-Murillo
17:35 - 18:00	Semi-Kelley continua
	Alejandro Illanes
18:05 - 18:30	On retractional skeletons on compact spaces
	CenobioYescas-Aparicio

#### November 11

## Room 3: General and Set-theoretic Topology (6)

Chair: Yukinobu Yajima

chan. Tukinood Tujina	
8:30 - 8:55	A useful common weakening of Lindelöf and H-closed
	Angelo Bella
9:00 - 9:25	Lindelöfness and Cech-completeness on the hypergroup of Hartman-
	Mycielski
	Iván Sánchez
9:30 - 9:55	On some properties of PIGO and PIGT
	Liang-Xue Peng

#### November 12

## Room 3: General and Set-theoretic Topology (7)

Chair: Salvador Garcia-Ferreira	
8:30 - 8:55	Uniform topology on countable subsets
	Angel Tamariz-Mascarua
8:55 - 9:20	On the diagonals of topological spaces
	Lei Mou
9:20 - 9:45	Topological properties of function space with hypo-graph topology
	Hanbian Yang
9:40 - 10:05	On countably selective spaces
	Rongxin Shen

## Room 3: General and Set-theoretic Topology (8)

Chair: Jiling Cao	
10:30 - 10:55	Point-regular covers and sequence-covering compact mappings
	Shou Lin
11:00 - 11:25	A study on D-spaces and the metrization of compact spaces with
	property ( $\sigma$ -A)
	Huan Wang
11:30 - 11:55	Epi-almost normality
	Ibtesam Alshammari
12:00 - 12:25	Some characterizations of Mildly IHurewicz covering property
	Manoj Bhardwaj

## Geometric Topology Session

#### November 9

#### Room 3: Geometric Topology (1)

Chair: Bohui Chen

16:40 - 17:15	Simultaneous extension of equivariant maps
	Sergey Antonyan
17:20 - 17:55	Some geometric correspondences for homothetic navigations
	Ming Xu
18:00 - 18:25	Dispersionless integrable hierarchy via Kodaira-Spencer gravity
	Xinxing Tang

November 11 Room 3: Geometric Topology (2) Chair: Sergey Antonyan

10:30 - 11:05	Upper and lower topologies on hyperspaces
	Natalia Jonard-Pérez
11:10 - 11:45	Gromov-Witten invariants and virtual neighborhoods
	Li Sheng
11:50 - 12:15	Rational cubic fourfolds in Hassett divisors
	Song Yang

## Room 3: Geometric Topology (3)

Chair: Bin Zhang

14:30 - 15:05	D-branes, K-homology and index theory
	Bai-ling Wang
15:10 - 15:45	Characterizing infinite-dimensional manifolds by general position
	properties
	Katsuhisa Koshino

## **Room 3: Geometric Topology (4)**

Chair: Li Sheng

16:30 - 17:05	A Kähler structure of the PU(2, 1) configuration space of four points
	in S^3
	Li-Jie Sun
17:10 - 17:35	Dolbeault cohomologies of blowing up complex manifolds
	Xiangdong Yang
17:35 - 18:00	Dual Orlicz-Brunn-Minkowski theory
	Baocheng Zhu

## November 12

## Room 1: Geometric Topology (5)

Chair: Natalia Jonard-Pérez

10:30 - 10:55	<b>Isoperimetric inequalities for (p,q)-mixed geominimal surface and (p,q)-mixed affine surface area</b> Xiao Li
11:00 - 11:25	<b>The mixed Pólya-Szegö principle and its applications</b> Niufa Fang

## Low-dimensional Topology Session

November 9

## Room 1: Low-dimensional Topology (1)

Chair:Weiping Li

14:30 - 15:05	Mapping classes are almost determined by their finite quotient actions
	Yi Liu

15:10 - 15:30	On crosscap numbers of knots
	Noboru Ito
15:30 - 15:50	New quantum invariants of genus 2 handlebody-2-tangles
	Sukuse Abe

## Room 1: Low-dimensional Topology (2)

Chair: Taizo Kanenobu

16:40 - 17:00	Studies of distance one surgeries on lens space L(p,1) and band surgeries on torus knot T(2,p) Jingling Yang
17:00 - 17:20	New deformations on spherical curves and Ostlund Conjecture
	Megumi Hashizume
17:30 - 17:50	Calculating the Arf invariant of a proper link from a bicolored
	diagram
	Kengo Kawamura
17:50 - 18:10	Generalized quandle cocycle invariants and shadow quandle cocycle
	invariants
	Atsushi Ishii

#### November 10

#### Room 1: Low-dimensional Topology (3)

Chair: Mario Eudave-Munoz

8:30 - 9:05	Existence of a transverse universal knot
	Jesus Rodriguez-Viorato
9:10 - 9:35	Torus handle additions on boundary component of genus three
	Luis Celso Chan-Palomo
9:40 - 10:05	The Neuwirth conjecture and (1,1)-knots
	Jose Frias

## Room 1: Low-dimensional Topology (4)

Chair: Seiichi Kamada

10:30 - 11:05	Conjugacy stability of braids and spherical Artin-Tits groups
	Bruno A. Cisneros de la Cruz
11:10 - 11:30	Comparison of minimal equal lengths in a once punctured torus
	running over its relative Teichmuller space
	Ying Zhang
11:30 - 11:50	On 3-submanifolds of $S^3$ which admit complete spanning curve
	systems
	Fengling Li

## Room 1: Low-dimensional Topology (5)

Chair: Hiroshi Goda

14:30 - 14:50	Exchange moves and non-conjugate braid representatives of links
	Alexander Stoimenow
14:50 - 15:10	Hurwitz action on tuples of permutations
	Yoshiro Yaguchi

15:20 - 15:40	Crossing number of an alternating 3-braid knot and canonical genus
	of its whitehead double
	Sang Youl Lee
15:40 - 16:00	Quasi-positive links and electromagnetism
	Benjamin Bode

## Room 1: Low-dimensional Topology (6)

Chair: Benjamin Bode

16:30 - 16:50	The knots k(l, m, n, p) and (1,1)-knots
	Mario Eudave-Muñoz
16:50 - 17:10	Semi-locally Alexander polynomials of knots
	Takefumi Nosaka
17:20 - 17:40	On the Cheeger-Chern-Simons invariant of a 3-manifold
	Seokbeom Yoon
17:40 - 18:00	Twisted Alexander polynomial and Matrix-weighted zeta function
	Hiroshi Goda

#### November 11

#### **Room 1: Low-dimensional Topology (7)**

Chair: Reifeng Q	iu
8:30 - 8:50	On Relation between quandle extension and group extension
	Yongju Bae
8:50 - 9:10	Extensions of multiple conjugation quandles
	TomoMurao
9:20 - 9:40	Cocycles of G-Alexander biquandles and G-Alexander multiple
	conjugation biquandles
	<u>ShosakuMatsuzaki</u>
9:40 - 10:00	Tensor products of quandles and classification of 1-handles attaching
	to surface-links
	Seiichi Kamada

#### Room 1: Low-dimensional Topology (8)

Chair: Yongju Bae

10:30 - 10:50	Vassiliev knot invariants derived from cable $\Gamma$ -polynomials
	Hideo Takioka
10:50 - 11:10	A multivariable polynomial invariant of virtual links and cut systems
	Naoko Kamada
11:20 - 11:40	Mapping class group of a Heegaard splitting
	Yanqing Zou
11:40 - 12:00	Skein modules: The braid approach
	Ioannis Diamantis

## Room 1: Low-dimensional Topology (9)

Chair: Makoto Ozawa

14:30 - 15:05	A stably trivial link
	Akio Kawauchi
15:10 - 15:30	Classification of ribbon 2-knots of 1-fusion with up to six crossings
	Taizo Kanenobu
15:30 - 15:50	3-manifolds admitting locally large Heegaard splittings
	Ruifeng Qiu

#### **Room 1: Low-dimensional Topology (10)**

Chair: Masakazu Teragaito

16:30 - 17:05	On smooth fake projective planes
	Jongil Park
17:10 - 17:30	The maximum and minimum genus of a multibranched surface
	Makoto Ozawa
17:30 - 17:50	Dirichlet domains for one-cone torus bundles
	Hirotaka Akiyoshi

#### November 12

#### **Room 1: Low-dimensional Topology (11)**

Chan. Throtaka Akryoshi	
8:30 - 8:50	Rigidity of matrix group actions on CAT(0) spaces with possible
	parabolic isometries
	Shengkui Ye
8:50 - 9:10	Counting conjugacy classes of groups with contracting elements
	Wenyuan Yang
9:20 - 9:40	Dehn surgeries along twist knots and non-trivial L-functions
	Jun Ueki
9:40 - 10:00	Generalized torsion and Dehn filling
	Masakazu Teragaito

## Order, Topology and Theoretic Computer Science Session

#### November 9

**Room 4: Order, Topology and Theoretic Computer Science(1)** 

Chair: Qingguo Li

14:30 - 15:05	Some recent advances in non-Hausdorff topology
	Xiaoquan Xu
15:10 - 15:45	Quantale-valued topological spaces via closure and convergence
	Hongliang Lai

#### November 10

Chair: Hui Kou

8:30 - 8:55	The monad of saturated prefilters
	Dexue Zhang
9:00 - 9:25	AL-spaces and algebraic L-domains
	Longchun Wang
9:30 - 9:55	Digital topological rough set structures and their applications
	Sang-Eon Han

## Room 4: Order, Topology and Theoretic Computer Science (3)

Chair: Xiaoquan Xu

10:30 - 11:05	SI-convergence in T <sub>0</sub> spaces
	Jing Lu
11:10-11:45	Core-compactness of Smyth powerspace
	Zhenchao Lyu
11:50 - 12:25	On some categories of metric-type spaces based on extended <i>t</i> -conorms
	Alexander Šostak

## Room 4: Order, Topology and Theoretic Computer Science (4)

Chair: Sang-Eon Han

16:30 - 16:55	Fuzzy relational morphological spaces: basic properties and
	topological interpretation
	Alexander Šostak
17:00 - 17:25	Investigation of "Flash Crash" via topological data analysis (TDA)
	Wonse Kim
17:30 - 17:55	Lower topology poset models of T <sub>1</sub> spaces
	Shen Chong

## November 11

## **Room 4: Order, Topology and Theoretic Computer Science (5)**

Chair: Alexander Šostak

14:30 - 15:05	Completeness and injectivity
	Soichiro Fujii
15:10 - 15:45	Concept lattices via quantaloid-enriched categories
	Lili Shen

## Set Theory Session

#### November 10

## Room 2: Set Theory (1)

Chair: Shuguo Zhang

8:30 - 9:05	Some more applications of omega $\omega_1$ -strongly compact cardinals in
0.50 7.05	
	General Topology
	Joan Bagaria
9:10 - 9:45	Set-theoretic principles which imply that the continuum is fairly large
	Sakaé Fuchino
9:50 - 10:25	Large cardinals as natural upper bounds on cardinal functions
	Toshimichi Usuba

## Room 2: Set Theory (2)

Chair: Sakaé Fuchino

10:30 - 11:05	Generalizations of Martin's Axiom, square, and a forcing axiom
	failure
	David Aspero
11:10 - 11:45	Reflection principles down to the continuum and an application of
	mixed support iteration
	André Ottenbreit Maschio Rodrigues
11:50 - 12:25	Basis sizes of uncountable linear orders
	Yinhe Peng

## Room 2: Set Theory (3)

Chair: Joan Bagaria

Chail toan Bugana	
14:30 - 15:05	Undefinability via topology
	Franklin D. Tall
15:10 - 15:45	On equivalence relations generated by Cauchy sequences in countable
	metric spaces
	Longyun Ding

## Room 2: Set Theory (4)

Chair: Jörg Brendle

16:30 - 17:05	Preserving selection principle properties
	Jialiang He
17:10 - 17:45	Some constructions involving inverse limits
	Aleksander Błaszczyk

## November 12

## Room 2: Set Theory (5)

Chair: Longyun Ding

8:30 - 8:55	Some game-theretic characterizations for rapid filter on omega
	Zuoheng Li
9:00 - 9:25	Several cardinal invariants associated to ideal γ-covers
	Jaroslav Šupina
9:30 - 9:55	Absolutely strongly star-Hurewicz property with respect to an ideal
	Sumit Singh

## **Topology and Dynamical Systems Session**

## November 9

#### **Room 4: Topology and Dynamical Systems (1)**

Chair: Enhui Shi

16:40 - 17:15	Random walks on groups acting on dendrites
	Andrei Malyutin
17:20 - 17:45	The singularities of special developable surfaces of frame curves in the
	3-Euclidean space
	Yanlin Li
17:50 - 18:15	Recent developments of chaos theory in topological dynamics
	Jian Li

#### November 10

## **Room 4: Topology and Dynamical Systems (2)**

Chair: Hisao Kato

14:30 - 15:05	Ergodic theory of random Anosov systems mixing on fibers
	Zeng Lian
15:10 - 15:35	Sensitive semigroup actions on continua
	Suhua Wang
15:40 - 16:05	Margulis-Ruelle inequality for general manifolds
	Gang Liao

#### November 11

#### Room 4: Topology and Dynamical Systems (3)

Chair: Benjamin Vejnar

8:30 - 9:05	Some results about sensitivity on linear dynamical systems
	Peiyong Zhu
9:10 - 9:35	On coupling lemma and stochastic properties for one-dimensional
	expanding maps
	Jianyu Chen

## **Room 4: Topology and Dynamical Systems (4)**

10:30 - 10:55	Minimal sets for amenable group actions on uniquely arcwise
	connected continua
	Enhui Shi
11:00 - 11:25	Densely locally minimal groups
	M. Shlossberg
11:30 - 11:55	Topological conjugation classes of tightly transitive subgroups of
	Homeo <sub>+</sub> (S <sup>1</sup> )
	Hui Xu

#### Chair: Yackelin Z. Rodríguez-López

#### **Room 4: Topology and Dynamical Systems (5)**

Chair: Peiyong Zhu

14:30 - 14:55	The complexity of cojugacy equivalence relation of interval dynamical
	systems
	Benjamin Vejnar
15:00 - 15:25	Algebraic entropy on topologically quasi-Hamiltonian groups
	Wenfei Xi

#### November 12

## **Room 4: Topology and Dynamical Systems (6)**

Chair: Andrei Malyutin

8:30 - 8:55	Topological entropy and indecomposability of G-like continua
	Hisao Kato
9:00 - 9:25	On topological properties of the Ellis semigroup
	Yackelin Z. Rodríguez-López

November 12

18:10 – 18:30 Closing ceremony

November 13 Day 5

Free activities, excursions/sight-seeing

(Expression of interests for group tours of sight-seeing)