ICTIS 2024 MANUAL

The Seventh International Conference on Tethers in Space

3rd June 2024-5th June 2024
Lassonde School Of Engineering, York University
Toronto, Canada

WELCOME

On behalf of the organization committee, I welcome you to attend the 7th International Conference on Tethers in Space (ICTiS 2024), which will be held on June 2-5, 2024 in Toronto, Canada. Hosted by York University, this conference will bring together multidisciplinary researchers in the space tether community on a single platform to encourage graduates, academicians, researchers, scientists, and industrialists from academia, space agencies, and industry to discuss and disseminate knowledge and results in theory, methodology, and new advances in space tether technology.

Our conference, which I am honored to chair, is a fully approved and peer-reviewed process. Each paper is blind peer-reviewed for its suitability, academic content, and thoroughness. Accepted papers will be published after approval in the conference proceedings, which will be cited by the Engineering Index (EI) and Scopus. Selected papers will be considered for special issues in the Acta Astronautica.

We are pleased to invite you to submit your paper that highlights your research results at the conference. Meet and network with your peers in your research.

Prof. Zheng Hong (George) Zhu

York University, Canada

COMMITTEE

CONFERENCE CHAIR

Dr. George Z.H. Zhu, York University, Toronto, Canada

TECHNICAL CHAIRS

Dr. Gonzalo Sánchez Arriaga, Universidad Carlos III de Madrid, Madrid, Spain
Dr. Sven G. Bilén, Pennsylvania State University, University Park, PA, USA

PUBLICATION CHAIR

Dr. Steve Ulrich, Carleton University, Ottawa, Ontario, Canada

TECHNICAL COMMITTEE

- Dr. Gonzalo Sanchez Arriaga, Universidad Carlos III de Madrid, Spain
- Dr. Sven G. Bilén, Pennsylvania State University, United States
- Dr. Eleonora Botta, University at Buffalo, United States
- Dr. Matthew P. Cartmell, University of Strathclyde, United Kingdom
- Dr. Alexander Jablonski, Carleton University, Canada
- Dr. Hirohisa Kojima, Tokyo Metropolitan University, Japan
- Dr. Arun Misra, McGill University, Canada
- Dr. Steve Ulrich, Carleton University, Canada
- Dr. Fan Zhang, Northwestern Polytechnical University, China
- Dr. Rui Zhong, Beihang University, China
- Dr. George Z. H. Zhu, York University, Canada

AWARD COMMITTEE

- Dr. Gonzalo Sanchez Arriaga, Universidad Carlos III de Madrid, Spain
- Dr. Sven G. Bilén, Pennsylvania State University, United States
- Dr. Steve Ulrich, Carleton University, Canada
- Dr. George Z.H. Zhu, York University, Toronto, Canada

VENUE INFORMATION

Address: Room 125, Bergeron Center Of Engineering Excellence

4700 Keele Street Toronto

Ontario, Canada M3J1P3

(Authors could take a subway to A3 District, check more information on the website)

Zoom ID: 939 449 0806 Passcode: Tether

THE SEVENTH INTERNATIONAL CONFERENCE ON TETHERS IN SPACE

(June 2nd, 2024-June 5th, 2024)

AGENDA

Date: 2nd June 2024

Venue

Bergeron Center for Engineering Excellence (BRG), York University

Event details

Time	Event	Room
3:00 PM-5:00 PM	On-site Registration	BRG125

THE SEVENTH INTERNATIONAL CONFERENCE ON TETHERS IN SPACE

(June 2nd, 2024-June 5th, 2024)

AGENDA

Date: 3rd June 2024
Venue: Bergeron Center for Engineering Excellence, York University

Zoom ID: 939 449 0806 **Passcode:** Tether

Event details

Time	Event	Room
8:00 AM	Reception & Breakfast	BRG125
8:40 AM	**Welcome Remarks:** Prof. George Zhu	BRG125
9:00 AM	**Keynote Speech** **Speaker:** Prof. Arun Misra, McGill University, Canada **Topic:** 50 Years of Modeling and Simulation of Space Tether Dynamics	BRG125
9:40 AM	**Session 1**: Space Net **Chair:** Prof. George Zhu	Hybrid
9:40 AM	**Speaker:** Achira Boonrath **Topic:** Identification of Parameters for Tethered Satellite System to Emulate Net-Captured Debris Towing (2024080)	BRG125
9:55 AM	**Speaker:** Maoying Zhou **Topic:** Theoretical Modeling and Analysis of the Launching Process in an Electromagnetic Coil Launcher (2024075)	Virtual
10:10 AM	**Speaker:** Hirohisa Kojima **Topic:** Suppression of Tether-Net Shrinking Motion Using Double-linked Bullet (2024032)	BRG125
10:25 AM	**Speaker:** Yifeng Ma **Topic:** Cooperative Game Theory Based Formation Control for Tethered Space Net Robot (2024019)	Virtual
10:40 AM	**Speaker:** Jinyu Liu **Topic:** Deployment and Descending Dynamics of a Large-Scale	Virtual

	Tether-Net for Asteroid Touchdown Missions (2024071)	
10:55 AM	Coffee Break	BRG125
11:15 AM	**Session 2:** Space Net & EDT **Chair:** Prof. Hirohisa Kojima	Hybrid
11:15 AM	**Speaker:** Meina Wang **Topic:** Experimental Reconstruction of The Unfolding Process of the Electromagnetically Launched Flexible Tethered Net (2024076)	Virtual
11:30 AM	**Speaker:** Weiliang Zhu **Topic:** Tensile Experiment Based Self-Adaptive Dynamic Model for Tethered Space Net (2024066)	BRG125
11:45 AM	**Speaker:** Andry Renaldy Pandie **Topic:** Numerical and Experimental Study on Effect of Net-Bullet Ejection Angles and Initial Distances on Successful Space Debris Capture (2024035)	BRG125
12:00 PM	**Speaker:** Sven Bilen **Topic:** Incentivizing Leo Debris Removal with Electrodynamic Tethers (2024081)	BRG125
12:15 PM	**Speaker:** Hongshi Lu **Topic:** Optimal Spin-Up Control of Linear Tether Formation Using Electrodynamic Force (2024015)	Virtual
12:30 PM	Group Photo Session & Lunch	BRG125
1:30 PM	**Keynote Speech** **Speaker:** Prof. Enrico Lorenzini, University of Padova, Italy **Topic:** The Evolution of Space Tethers Technology	BRG125
2:15 PM	**Session 3:** EDT & Space Elevator **Chair:** Prof. Sven Bilen	Hybrid
2:15 PM	**Speaker:** Gefei Shi (George Zhu) **Topic:** Orbital States Keeping of the Floating Partial Space Elevator Using Reinforming Learning Method (2024005)	BRG125
2:30 PM	**Speaker:** Heng Jiang **Topic:** Electrodynamic Tether and Brake Sails Combination Deorbit Design (2024006)	Virtual
2:45 PM	**Speaker:** Mani Kakavand **Topic:** Modeling and Mode-Shape Analysis of Electrodynamic Space Tethers Using Geometric Computational Dynamics (2024085)	BRG125
3:00 PM	**Speaker:** Gonzalo Sanchez-Arriaga **Topic:** A Review of Electrodynamic Tether Missions from a	BRG125

	Dimensionless Analysis Perspective and to Promote the Opening and Support of Markets in the Space Sector (2024041)	
3:15 PM	**Speaker:** Masahiro Nohmi **Topic:** EDT Demonstration for Keeping Low Altitude Orbit Using Carbon Nanotube Tether (2024082)	BRG125
3:30 PM	Coffee Break	BRG125
4:00 PM	**Session 4:** EDT & E-Sail **Chair:** Prof. Arun Misra	Hybrid
4:00 PM	**Speaker:** John Inness **Topic:** Electric Sail Design Sensitivities (2024040)	Virtual
4:15 PM	**Speaker:** Guillermo Pacheco-Ramos **Topic:** Optimal Control Approach for Stable E-Sail Transitions (2024077)	Virtual
4:30 PM	**Speaker:** Gonzalo Sánchez Arriaga **Topic:** PERSEI SPACE: A New Company on Space Tethers (2024090)	BRG125
4:45 PM	**Speaker:** Martin Tajmar **Topic:** Overview of Electron Emitter Technology Development at Tu Dresden for the Application in Electrodynamic Tether Systems (2024027)	BRG125
5:00 PM	**Speaker:** Angel Del Pino JimÉNez **Topic:** Hardware Emulator of a Short Electrodynamic Tether (2024058)	BRG125
5:15 PM	**End of Day 1 Program**	
6:00 PM	**Banquet** In Schulich Executive Dining Hall, York University	Schulich Executive Dining Hall

THE SEVENTH INTERNATIONAL CONFERENCE ON TETHERS IN SPACE

(June 2nd, 2024-June 5th, 2024)

AGENDA

Date: 4th June 2024
Venue: Bergeron Center for Engineering Excellence, York University
Zoom ID: 939 449 0806 **Passcode:** Tether

Event details

Time	Event	Room
8:00 AM	Reception & Breakfast	BRG125
9:00 AM	**Keynote Speech** **Speaker:** Dr. Robert P. Hoyt, Dark Yonder LLC, USA **Topic:** Tethers Unlimited: A Wild Ride Through the TRL Valley of Death	BRG125
9:40 AM	**Session 5**: E-Sail & Space Tether **Chair:** Prof. Gonzalo Sanchez-Arriaga	Hybrid
9:40 AM	**Speaker:** Chonggang Du **Topic:** A Comprehensive Investigation of Electric Solar Wind Sail Coning Motion (2024018)	Virtual
9:55 AM	**Speaker:** Shouxu Chen **Topic:** Iterative Learning Control for Multiple Deployment and Retrieval of Tethered Satellite System with Input Saturation (2024074)	Virtual
10:10 AM	**Speaker:** Junjie Kang **Topic:** Simple Velocity Planning Control of Space Tether Deployment (2024067)	BRG125
10:25 AM	**Speaker:** Emma Jaynes **Topic:** Design and Application of Tethered Spacecraft Simulators (2024021)	BRG125
10:40 AM	**Speaker:** Jingtian Chen **Topic:** Chaotic Behaviors of a Tethered Satellite System Induced by Longitudinal Oscillation (2024064)	Virtual

10:55 AM	Coffee Break	BRG125
11:15 AM	**Session 6:** Space Tether & EDT **Chair:** Prof. Martin Tajmar	Hybrid
11:15 AM	**Speaker:** Giulio Polato **Topic:** Experimental Test and Numerical Validation for Evaluating the Dynamics of the In-Line Dumper for the E.T.PACK-F Project (2024051)	BRG125
11:30 AM	**Speaker:** Ying Zhang **Topic:** Satellite Attitude Motion Analysis of Three-Body Tethered System During Its Deployment Process Using Method of Integral Manifolds (2024008)	Virtual
11:45 AM	**Speaker:** Mingze Xie **Topic:** Calculation and Control of Equilibrium Position of Bare Electrodynamic Tether System (2024013)	Virtual
12:00 PM	**Speaker:** Jie Yang **Topic:** Ground Experimental Study on A Mechanism for Repeatable Deployment and Retrieval of a Two-Body Tethered Satellite System (2024073)	Virtual
12:15 PM	**Speaker:** Linxiao Li **Topic:** Along-Track Deployment Control of Space Tether System for SAR-GMTI Mission (2024007)	Virtual
12:30 PM	Lunch	BRG125
1:30 PM	**Session 7:** Space Tether **Chair:** Dr. Mani Kakavand	Hybrid
1:30 PM	**Speaker:** Fuzhen Yao **Topic:** A Concept Design of Novel Dyson-Harrop CubeSat for Harvesting Energy from Solar Wind (2024088)	BRG125
1:45 PM	**Speaker:** Qi Zhang **Topic:** Finite Element Model-Based Computational Control and State Estimation for Flexible Space Tether System (2024084)	BRG125
2:00 PM	**Speaker:** Kevin Waizenegger **Topic:** Space Tether Research at the University of Stuttgart (2024079)	BRG125
2:15 PM	**Speaker:** Junjie Kang **Topic:** De-Spin and Reorientation Control of Asteroid by Tethered Spacecraft (2024068)	BRG125
2:30 PM	**Speaker:** Bahareh Vossoughi **Topic:** Modeling and Control of Orbital Perturbation Torques and	Virtual

	Mass Distribution Impact on Libration Dynamics of Tethered Systems: A Case Study of a 12U Tethered CubeSat System with a 100 m, Non-conductive, Rigid Space Tether on Sun-Synchronous Orbit (2024043)	
2:45 PM	**Speaker:** Ghasem Sharifinajafabadi **Topic:** Hardware in the Loop Validation of the Attitude Determination and Control System of a Deorbit Device Equipped with an Electrodynamic Tether (2024039)	Virtual
3:00 PM	**Speaker:** Giovanni Anese **Topic:** Bare Photovoltaic Tether Characteristics for ISS Reboost (2024044)	BRG125
3:15 PM	Coffee Break	BRG125
3:45 PM	**Session 8**: Space Tether **Chair:** Prof. Masahiro Nohmi	Hybrid
3:45 PM	**Speaker:** Alice Brunello **Topic:** The Deployment Mechanism of the E.T. PACK Deorbit System: Functional and Qualification Tests (2024057)	BRG125
4:00 PM	**Speaker:** Jihang Yang **Topic:** Velocity Observer Design of Space Tether System Using Immersion and Invariance Technique (2024030)	Virtual
4:15 PM	**Speaker:** Senwei Lv (Fuzhen Yao) **Topic:** Design of Movement Scheme for Space Station Servicing Satellite (2024022)	BRG125
4:30 PM	**Speaker:** Caoqun Luo **Topic:** Learning-Based Deployment and Retrieval Control of a Spinning Tethered Satellite Formation System (2024069)	Virtual
4:45 PM	**Speaker:** Nicole A. Pallotta **Topic:** Tethered Artificial Gravity Assists for Capture about Binary Asteroids in the Circular Restricted Three-Body Problem (2024091)	BRG125
5:00 PM	**End of Day 2 Program**	BRG125
6:00 PM	**Meet & Eats**-Collaboration Networking, all welcome.	BRG125

THE SEVENTH INTERNATIONAL CONFERENCE ON TETHERS IN SPACE

(June 2nd, 2024-June 5th, 2024)

AGENDA

Date: 5th June 2024
Venue: Bergeron Center for Engineering Excellence, York University
Zoom ID: 939 449 0806 **Passcode:** Tether

Event details

Time	Event	Room
8:00 AM	Reception & Breakfast	BRG125
8:45 AM	AIAA Tether Technical Committee Meeting, All welcome	Hybrid
9:30 AM	**Session 9**: Space Tether **Chair:** Prof. George Zhu	Hybrid
9:30 AM	**Speaker:** Peijie Sun **Topic:** Adaptive Fault-Tolerant Control and Its Experimental Verification of Spinning Tether System for Space Debris Removal (2024014)	Virtual
9:45 AM	**Speaker:** Chenyang Sun **Topic:** The Three-Dimensional Maneuver Control of Spinning Tether System Under a New Lagrangian Model (2024012)	Virtual
10:00 AM	**Speaker:** Yajie Cheng **Topic:** Detumbling Control of An Underactuated Tethered Satellite System (2024028)	Virtual
10:15 AM	**Speaker:** Hang Yang **Topic:** Analysis of Fly-Around Mission with Spinning Tether System for Space Station Observation (2024010)	Virtual
10:30 AM	**Speaker:** Ao Jin **Topic:** Data-Enable Control for Tethered Space Robot Deployment with External Disturbance (2024033)	Virtual
11:30 AM	Lunch	BRG125

1:00 PM	**Award Announcement & Closing Remark** - Prof. George Zhu	BRG125

THE SEVENTH INTERNATIONAL CONFERENCE ON TETHERS IN SPACE

(June 3rd, 2024)

ABSTRACT

Session 1 - Space Net

Chair: Prof. George Zhu

- **Title:** Identification of Parameters for Tethered Satellite System to Emulate Net-Captured Debris Towing (2024080)
- **Title:** Theoretical Modeling and Analysis of the Launching Process in an Electromagnetic Coil Launcher (2024075)
- **Title:** Suppression of Tether-Net Shrinking Motion Using Double-linked Bullet (2024032)
- **Title:** Cooperative Game Theory Based Formation Control for Tethered Space Net Robot (2024019)
- **Title:** Deployment and Descending Dynamics of a Large-Scale Tether-Net for Asteroid Touchdown Missions (2024071)

THE SEVENTH INTERNATIONAL CONFERENCE ON TETHERS IN SPACE

(June 3rd, 2024)

ABSTRACT

Session 2 - Space Net & EDT

Chair: Prof. Hirohisa Kojima

- **Title:** Experimental Reconstruction of The Unfolding Process of The Electromagnetically Launched Flexible Tethered Net (2024076)
- **Title:** Tensile Experiment Based Self-Adaptive Dynamic Model for Tethered Space Net (2024066)
- **Title:** Numerical and Experimental Study on Effect of Net-Bullet Ejection Angles and Initial Distances on Successful Space Debris Capture (2024035)
- **Title:** Incentivizing Leo Debris Removal with Electrodynamic Tethers (2024081)
- **Title:** Optimal Spin-Up Control of Linear Tether Formation Using Electrodynamic Force (2024015)

THE SEVENTH INTERNATIONAL CONFERENCE ON TETHERS IN SPACE

(June 3rd, 2024)

ABSTRACT

Session 3 – EDT & Space Elevator

Chair: Prof. Sven Bilen

- **Title:** Orbital States Keeping of the Floating Partial Space Elevator Using Reinforming Learning Method (2024005)
- **Title:** Electrodynamic Tether and Brake Sails Combination Deorbit Design (2024006)
- **Title:** Modeling and Mode-Shape Analysis of Electrodynamic Space Tethers Using Geometric Computational Dynamics (2024085)
- **Title:** A Review of Electrodynamic Tether Missions from a Dimensionless Analysis Perspective and to Promote the Opening and Support of Markets in the Space Sector (2024041)
- **Title:** EDT Demonstration for Keeping Low Altitude Orbit Using Carbon Nanotube Tether (2024082)

THE SEVENTH INTERNATIONAL CONFERENCE ON TETHERS IN SPACE

(June 3rd, 2024)

ABSTRACT

Session 4 – EDT & E-Sail

Chair: Prof. Arun Misra

- **Title:** Electric Sail Design Sensitivities (2024040)
- **Title:** Optimal Control Approach for Stable E-Sail Transitions (2024077)
- **Title:** PERSEI SPACE: A New Company on Space Tethers (2024090)
- **Title:** Overview of Electron Emitter Technology Development at Tu Dresden for the Application in Electrodynamic Tether Systems (2024027)
- **Title:** Hardware Emulator of a Short Electrodynamic Tether (2024058)

THE SEVENTH INTERNATIONAL CONFERENCE ON TETHERS IN SPACE

(June 4th, 2024)

ABSTRACT

Session 5 - E-Sail & Space Tether

Chair: Prof. Gonzalo Sanchez-Arriaga

- **Title:** A Comprehensive Investigation of Electric Solar Wind Sail Coning Motion (2024018)
- **Title:** Iterative Learning Control for Multiple Deployment and Retrieval of Tethered Satellite System with Input Saturation (2024074)
- **Title:** Simple Velocity Planning Control of Space Tether Deployment (2024067)
- **Title:** Design and Application of Tethered Spacecraft Simulators (2024021)
- **Title:** Chaotic Behaviors of a Tethered Satellite System Induced by Longitudinal Oscillation (2024064)

THE SEVENTH INTERNATIONAL CONFERENCE ON TETHERS IN SPACE

(June 4th, 2024)

ABSTRACT

Session 6 - Space Tether & EDT

Chair: Prof. Martin Tajmar

- **Title:** Experimental Test and Numerical Validation for Evaluating the Dynamics of the In-Line Dumper for the E.T.PACK-F Project (2024051)
- **Title:** Satellite Attitude Motion Analysis of Three-Body Tethered System During Its Deployment Process Using Method of Integral Manifolds (2024008)
- **Title:** Calculation and Control of Equilibrium Position of Bare Electrodynamic Tether System (2024013)
- **Title:** Ground Experimental Study on A Mechanism for Repeatable Deployment and Retrieval of a Two-Body Tethered Satellite System (2024073)
- **Title:** Along-Track Deployment Control of Space Tether System for SAR-GMTI Mission (2024007)

THE SEVENTH INTERNATIONAL CONFERENCE ON TETHERS IN SPACE

(June 4th, 2024)

ABSTRACT

Session 7 - Space Tether

Chair: Dr. Mani Kakavand

- **Title:** A Concept Design of Novel Dyson-Harrop CubeSat for Harvesting Energy from Solar Wind (2024088)
- **Title:** Finite Element Model-Based Computational Control and State Estimation for Flexible Space Tether System (2024084)
- **Title:** Space Tether Research at the University of Stuttgart (2024079)
- **Title:** De-Spin and Reorientation Control of Asteroid by Tethered Spacecraft (2024068)
- **Title:** Modeling and Control of Orbital Perturbation Torques and Mass Distribution Impact on Libration Dynamics of Tethered Systems: A Case Study of a 12U Tethered CubeSat System with a 100 m, Non-conductive, Rigid Space Tether on Sun-Synchronous Orbit (2024043)
- **Title:** Hardware in the Loop Validation of the Attitude Determination and Control System of a Deorbit Device Equipped with an Electrodynamic Tether (2024039)
- **Title:** Bare Photovoltaic Tether Characteristics for ISS Reboost (2024044)

THE SEVENTH INTERNATIONAL CONFERENCE ON TETHERS IN SPACE

(June 4th, 2024)

ABSTRACT

Session 8 - Space Tether

Chair: Prof. Masahiro Nohmi

- **Title:** The Deployment Mechanism of the E.T.PACK Deorbit System: Functional and Qualification Tests (2024057)
- **Title:** Velocity Observer Design of Space Tether System Using Immersion and Invariance Technique (2024030)
- **Title:** Design of Movement Scheme for Space Station Servicing Satellite (2024022)
- **Title:** Learning-Based Deployment and Retrieval Control of a Spinning Tethered Satellite Formation System (2024069)
- **Title:** Tethered Artificial Gravity Assists for Capture about Binary Asteroids in the Circular Restricted Three-Body Problem (2024091)

THE SEVENTH INTERNATIONAL CONFERENCE ON TETHERS IN SPACE

(June 5th, 2024)

ABSTRACT

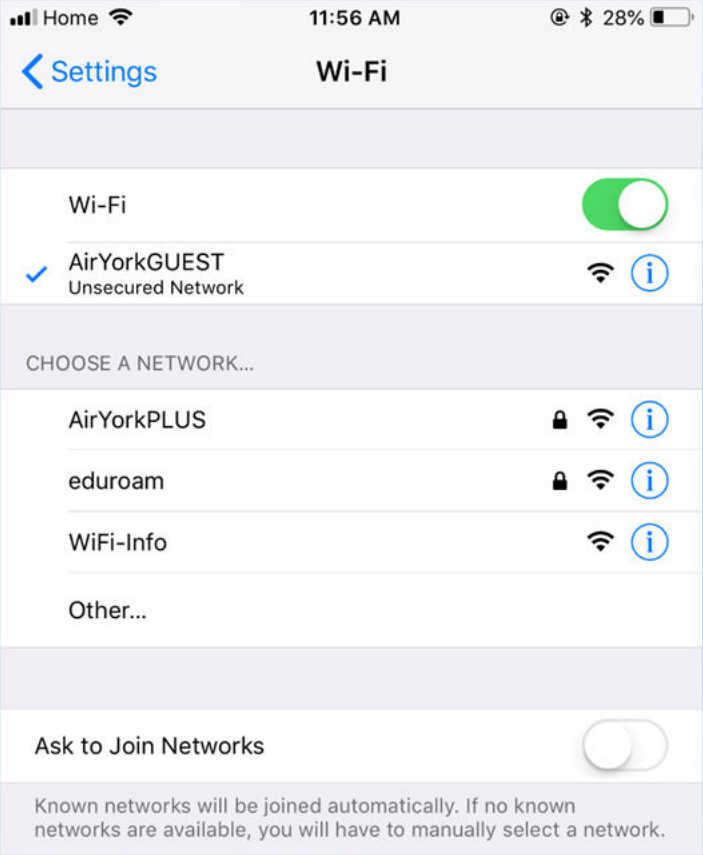
Session 9 - Space Tether

Chair: Prof. George Zhu

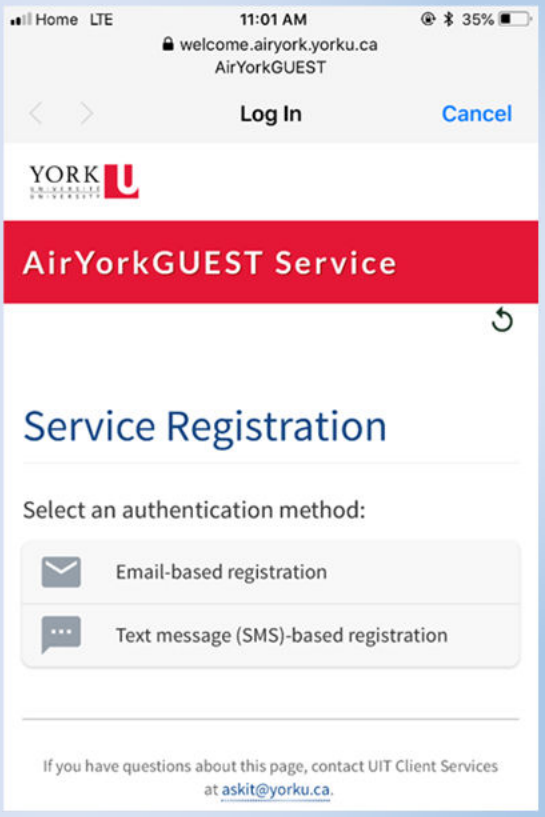
- **Title:** Adaptive Fault-Tolerant Control and Its Experimental Verification of Spinning Tether System for Space Debris Removal (2024014)
- **Title:** The Three-Dimensional Maneuver Control of Spinning Tether System Under a New Lagrangian Model (2024012)
- **Title:** Detumbling Control of An Underactuated Tethered Satellite System (2024028)
- **Title:** Analysis of Fly-Around Mission with Spinning Tether System for Space Station Observation (2024010)
- **Title:** Data-Enable Control for Tethered Space Robot Deployment with External Disturbance (2024033)

Connecting to AirYorkGuest

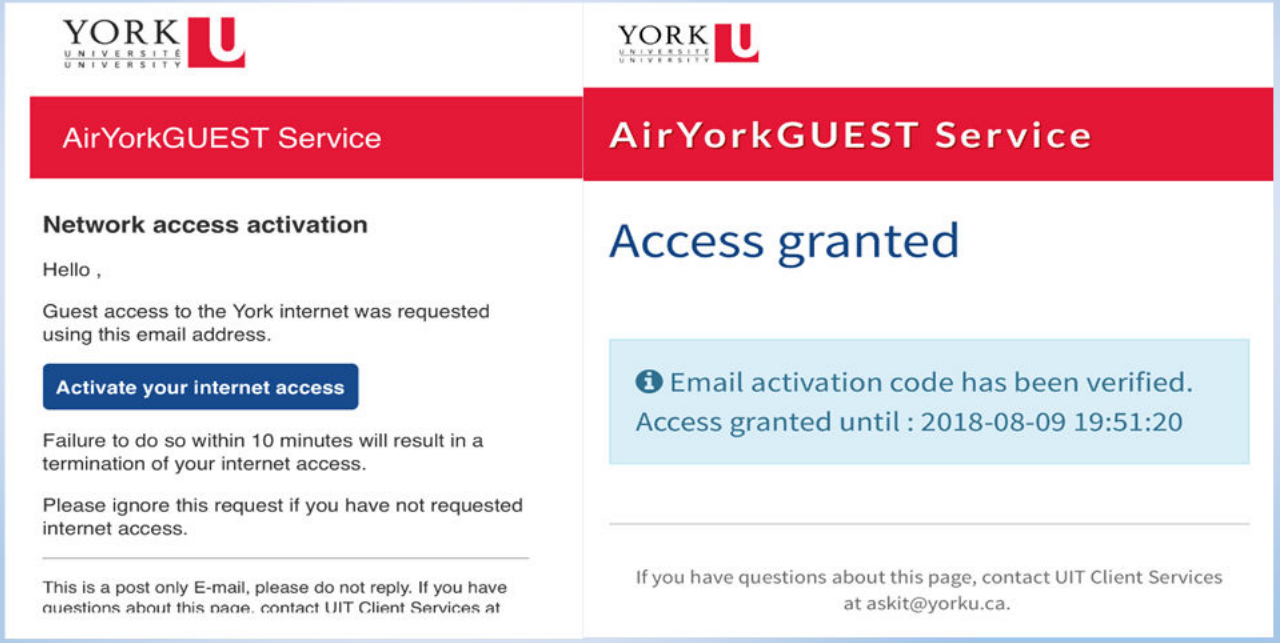
1. **Connect to the AirYorkGUEST network.**
   In the list of available wireless networks, select AirYorkGUEST**.**



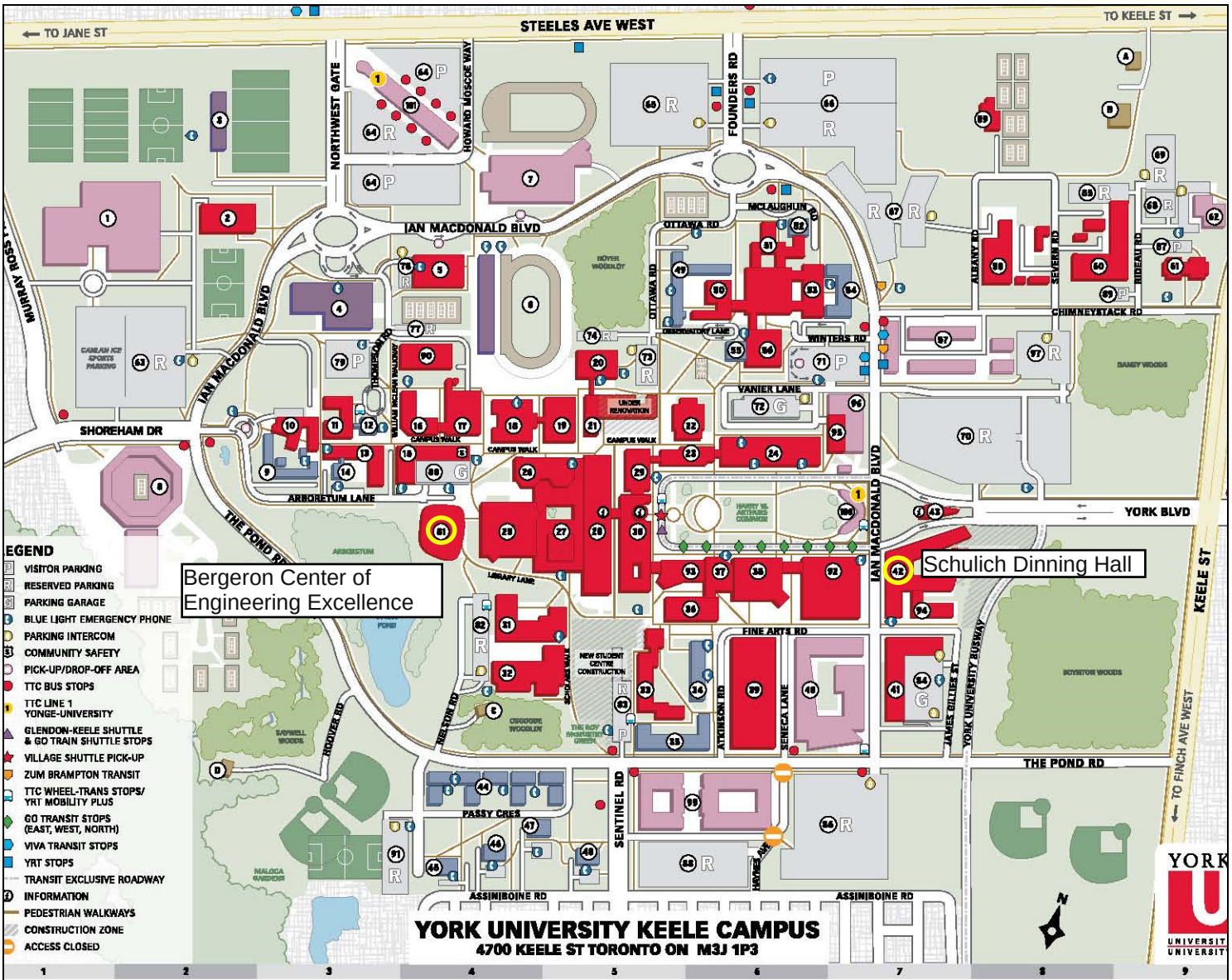
2. **Get redirected to the AirYorkGUEST splash screen and enter your information.**
   You will be redirected to the AirYorkGUEST Service Registration Page. Select an authentication method – email SMS. Accept the terms and conditions. If you provide your email address then you will get 10 mins of internet access to check your mail and click on the validation link.



3. **Receive and confirm the verification message and start using the Internet.**
   Click on the validation link on the email you received to start accessing the internet or enter the verification code you received via SMS in the Service Registration Website.



YORK UNIVERSITY KEELE CAMPUS COLOUR



CAMPUS DIRECTORY

ACADEMIC, ADMINISTRATIVE & COMMERCIAL BUILDINGS

59	190 Albany Road	ALB	A8
92	Accolade East	ACE	E7
93	Accolade West	ACW	E6
33	Atkinson	ATK	E5
29	Behavioural Science	BSB	D5
41	**Bennett Centre for Student Services, Admissions**	BCS	E7
81	Bergeron Centre for Engineering Excellence	BRG	E4
24	Bookstore, York Lanes	YL	D6
10	Calumet College	CC	D3
27	Central Square	CSQ	D5
58	Central Utilities Building	CUB	B8
38	Centre for Film & Theatre	CFT	E6
16	Chemistry	CB	D4
26	Curtis Lecture Halls	CLH	D5
94	Executive Learning Centre	ELC	E7
21	Farquharson Life Sciences	FRQ	D5
50	Founders College	FC	C6
31	Health, Nursing & Environmental Studies	HNE	E4
32	Ignat Kaneff Building, Osgoode Hall Law School	OSG	E4
36	Joan & Martin Goldfarb Centre for Fine Arts	CFA	E5
95	Kaneff Tower	KT	D7
61	Kinsmen	K	C9
19	Lassonde Building	LAS	D5
90	Life Sciences Building	LSB	C4
43	Loma R. Marsden Honour Court & Welcome Centre	HC	D7
20	Lumbers	LUM	C5
51	McLaughlin College	MC	B6
11	Norman Bethune College	BC	D3
17	Observatory, Petrie	PSE	D4
17	Petrie Science & Engineering	PSE	D4
60	Physical Resources Building	PRB	B9
28	Ross Building	R	D5
25	Scott Library	SCL	D4
27	Scott Religious Centre, CSQ	SRC	D5
42	Seymour Schulich Building	SSB	E7
2	Sherman Health Science Research Centre	SHR	B2
18	Steacie Science & Engineering Library	STL	D4
22	Stedman Lecture Halls	SLH	D6
13	Stong College	SC	D3
23	Student Centre	STC	D6
4	Tait McKenzie Centre	TM	C3
56	Vanier College	VC	C6
30	Vari Hall	VH	D5
39	Victor Phillip Dahdaleh Building *(Formerly Technology Enhanced Learning - TEL)*	DB	E6
5	West Office Building	WOB	C4
15	William Small Centre	WSC	D4
53	Winters College	WC	C6
24	York Lanes	YL	D6

RESIDENCES & APARTMENTS

48	320 Assiniboine Road	AS2	G5
47	340 Assiniboine Road	AS4	F4
46	360 Assiniboine Road	AS6	G4
45	380 Assiniboine Road	AS8	G4
34	Atkinson Residence	AR	E6
12	Bethune Residence	BR	D3
9	Calumet Residence	CR	D3
49	Founders Residence	FR	C5
44	Passy Gardens, 2–18 Passy Cres.	PASSY	F4
35	The Pond Road Residence	PON	F5
14	Stong Residence	SR	D3
52	Tatham Hall	TH	B6
55	Vanier Residence	VR	C6
54	Winters Residence	WR	C7

PARKING GARAGES – VISITORS

80	Arboretum Lane Parking Garage	ARB	D4
84	Student Services Parking Garage	SSP	E7
72	York Lanes Parking Garage	YLP	D6

PARKING LOTS – VISITORS

83	Atkinson Lot	E5
66	Founders Road East Lot	A6
87	Kinsmen Lot	B9
64	Northwest Gate Lot	B4
89	Physical Resources Building South Visitor Lot	C9
77	Tait McKenzie Lot	C3
79	Thompson Road Lot	C4
71	Vanier Lot	C7

PARKING LOTS – RESERVED

67	Albany Road Lot	B7
83	Atkinson Lot	E5
97	Chimneystack Lot	C8
66	Founders Road East Lot	A6
65	Founders Road West Lot	A5
73	Lumbers Lot	C5
74	Lumbers North Lot	C5
82	Nelson Road Lot	E4
64	Northwest Gate Lot	B4
91	Passy Crescent Lot	G3
85	Physical Resources Building North Lot	D7
68	Physical Resources Lot	B9
69	Rideau Road Lot	B9
88	Sentinel Road Lot	F6
63	Shoreham Drive Lot	C2
86	The Pond Road Lot	F7
71	Vanier Lot	C7
78	West Office Building West Lot	C4
70	York Boulevard Lot	B8

VISUAL PERFORMANCE ARTS FACILITIES

92	Art Gallery of York University	ACE	E7
37	Burton Auditorium×	BU	E6
93	Gales Gallery	ACW	E6
38	Joseph G. Green Studio Theatre	CFT	E6
92	McLean Performance Studio	ACE	E7
92	Price Family Cinema	ACE	E7
92	Sandra Faire & Ivan Fecan Theatre	ACE	E7
92	Tribute Communities Recital Hall	ACE	E7

SPORT & RECREATION FACILITIES

4	Tait McKenzie Centre	TM	C3
3	York Stadium	STA	A2
6	York Lions Stadium	YLS	C4

HISTORICAL HOUSES

C	Skennen'kó:wa Gamig ᐸᓇᓇᑎᑯᒡᐧᐃᒪ ᑲᒥᒃ	SKG	F4
D	Hoover House	HOH	F2
B	Stong Barn	SB	A9
A	Stong House	SH	A9

NON-YORK U BUILDINGS

96	Archives of Ontario *	AO	D7
1	Canlan Ice Sports *	ICE	B1
62	Computer Methods Building	CMB	B9
57	Harry Sherman Crowe Housing Co-op	HCC	C7
40	Seneca @ York, Stephen E. Quinlan Building	SAY	E7
8	Tennis Canada - Aviva Centre *	TC	D2
7	Track & Field Centre *	TFC	B4
99	The Quad Student Housing *(managed by Forum Campus Suites)*	QSH	F6
100	York University TTC subway station	YUS	D6
101	Pioneer Village TTC subway station	PVS	A3

* Shared use
× Temporarily Closed

Please visit yorku.ca/mapskeele for the most up to date version of the campus map

JANUARY 2018