



**AIM**  
**2022**  
SAPPORO

2022 IEEE/ASME International Conference on  
**Advanced Intelligent Mechatronics**

**July 11th- 15th, 2022**

Royton Sapporo, Sapporo, Hokkaido, Japan

**25<sup>th</sup> AIM Anniversary**

**AIM(1997~2021) Data, History, and Memory**

**Kok-Meng Lee**

George W. Woodruff School of Mechanical Engineering  
Georgia Institute of Technology  
Atlanta, GA 30332-0405, USA

July 12, 2022, 19:00 to 21:00 (JST), 6:00-8:00 (EST)



IEEE/ASME International Conference on  
**Advanced Intelligent Mechatronics**



**IEEE Industrial Electronics Society (IES)**

**Robotics and Automation Society (RAS)**

**ASME Dynamic Systems and Control Division (DSC)**

## **Special Thanks to AIM '97 Honorary Advisory**

**Fumio Harashima**, University of Tokyo

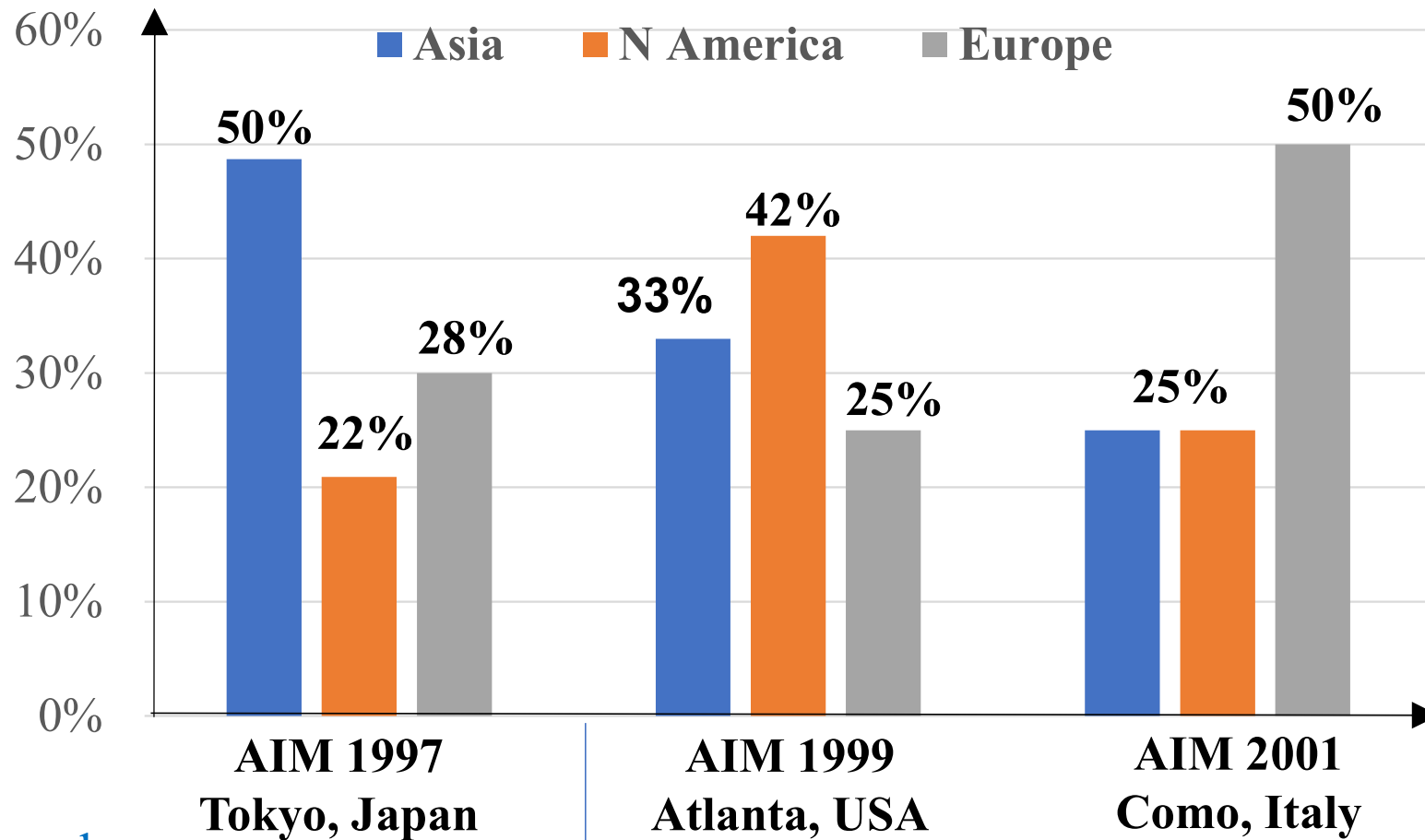
**Tzyh Jong (T. J.) Tarn**, Washington University

**Masayoshi Tomizuka**, Univ. of California, Berkeley

**Toshio Fukuda**, Nagoya University



# Distribution of contributions



- Inaugural

(GC: **Hideki Hashimoto**  
LC: **Shigeki Sugano**)

- NSF (US) support

(G. co-C: **Kok-Meng Lee**)

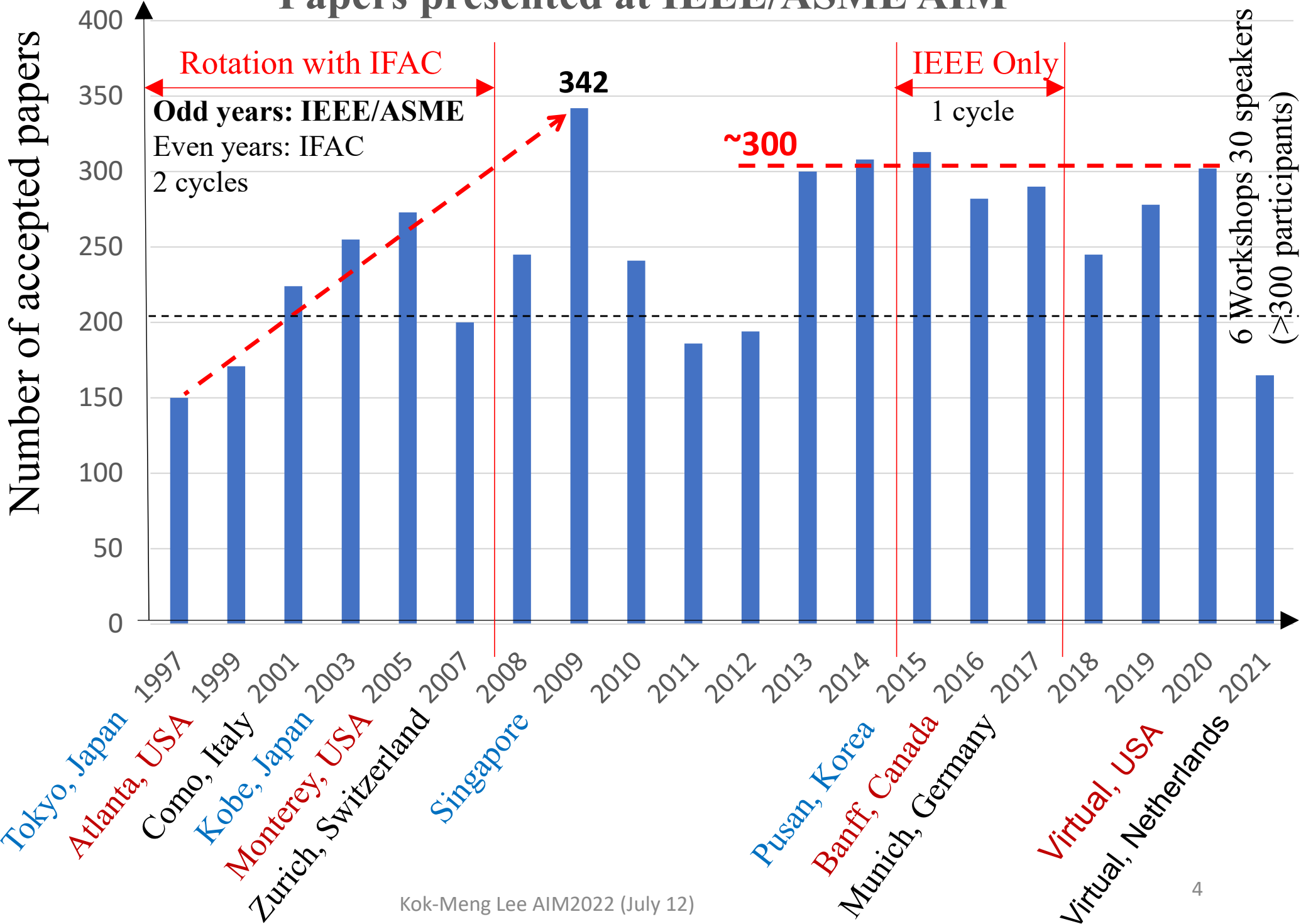
- Extended abstracts

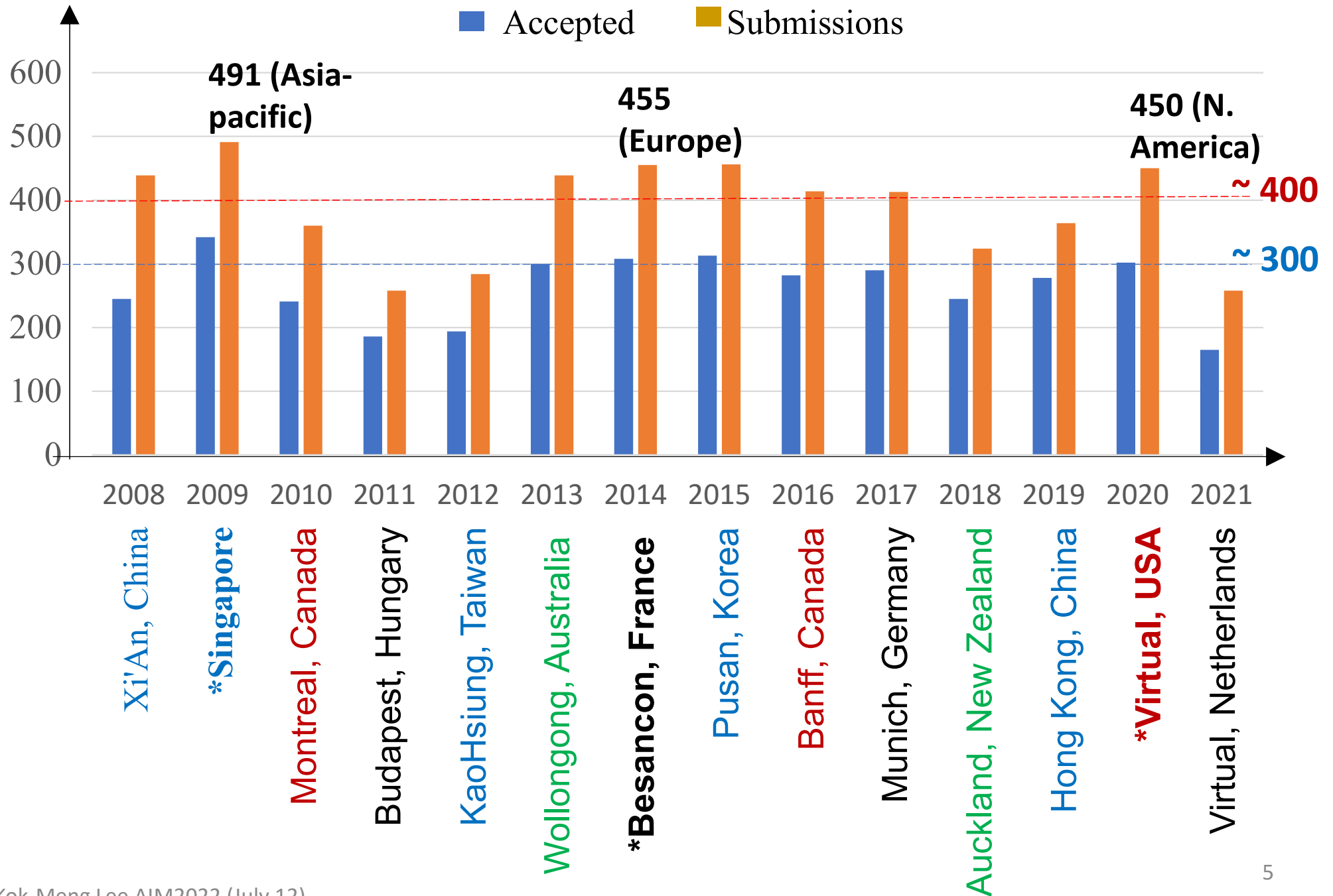
GC: **Kok-Meng Lee**

GC: **Bruno Siciliano**

- Full-length (3 peer-reviewed) papers
- IEEE/ASME AIM Proceedings
- E-Media

# Papers presented at IEEE/ASME AIM





<b>AIM 2005 Keyword (KW) ranking</b>	<b>First KW count</b>	<b>Second KW count</b>	<b>Third KW count</b>	<b>Total count</b>
<b>Control Applications in Mechatronics</b>	38	24	18	<b>80</b>
Modeling and Design of Mechatronic Systems	21	21	10	<b>52</b>
Mobile Robots	19	20	10	<b>49</b>
Robot Dynamics and Control	15	17	12	<b>44</b>
Actuators in Mechatronic Systems	16	8	6	<b>30</b>
Sensors and Sensing Systems	10	10	7	<b>27</b>
Design Optimization in Mechatronics	6	13	7	<b>26</b>
Artificial Intelligence in Mechatronics	10	8	4	<b>22</b>
Intelligent Process Automation	10	8	4	<b>22</b>
Micro/Nano Manipulation	12	5	5	<b>22</b>

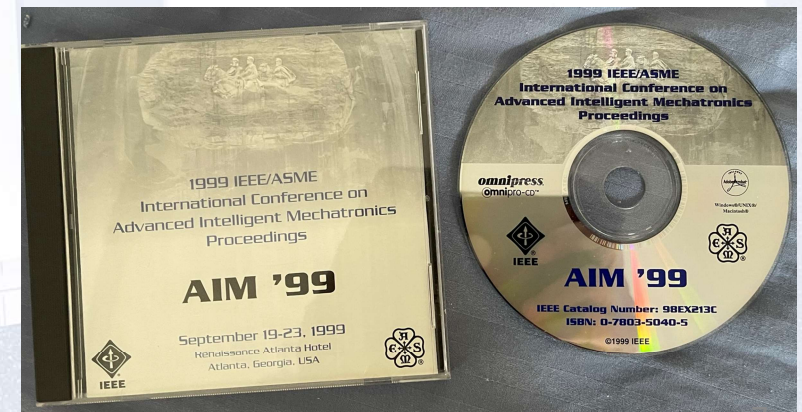
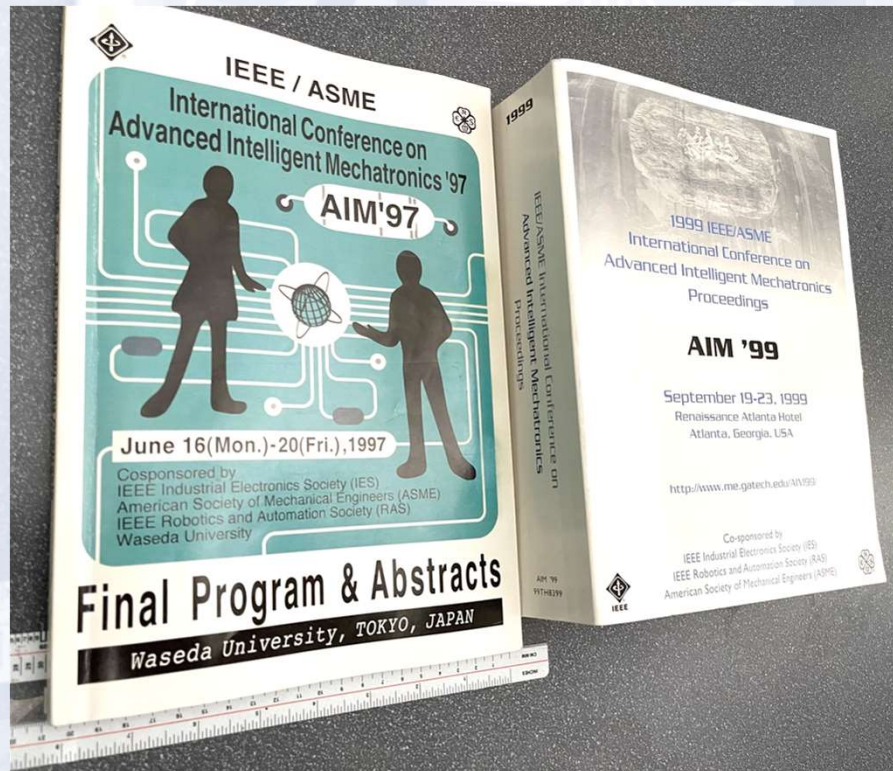
## **AIM 2016**

### **Final Keywords**

### **Occurrences (sorted)**

<b>Control applications in Mechatronics</b>	<b>264</b>	Automotive systems	91
Nonlinear systems	<b>208</b>	Stability	89
Modeling	<b>177</b>	Biological systems applications	76
Robotics	<b>150</b>	Uncertain systems	69
Optimal control	<b>106</b>	Adaptive system	68
Robust control	<b>106</b>	Dynamics and control	68
Optimization	<b>104</b>	Biomedical systems	64
Estimation	<b>98</b>	Vibration control	62
Identification	<b>97</b>	Energy/power systems	60

- Inaugural
- Abstracts
- NSF funded
- Full-length papers
- Peer-reviewed (3)
- AIM Proceedings
- E-Media



# IEEE/ASME (AIM) International Conference on Advanced Intelligent Mechatronics

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Proceedings

**All Proceedings**

Popular



## All Proceedings



1999 IEEE/ASME  
International Conference on  
Advanced Intelligent Mechatronics

### AIM '99

September 19-23, 1999

Renaissance Atlanta Hotel  
Atlanta, Georgia, USA

### ADVANCE PROGRAM

<http://www.me.gatech.edu/AIM99/>

2001 IEEE/ASME International Conference on Advanced Intelligent Mechatronics. Proceedings (Cat. No.01TH8556)

Location: Como, Italy

1999 IEEE/ASME International Conference on Advanced Intelligent Mechatronics (Cat. No.99TH8399)

Location: Atlanta, GA, USA

Full-length papers

Proceedings of IEEE/ASME International Conference on Advanced Intelligent Mechatronics

Location: Tokyo, Japan



Co-sponsored by  
IEEE Industrial Electronics Society (IES)  
IEEE Robotics and Automation Society (RAS)  
American Society of Mechanical Engineers (ASME)





Fully integrated paper Submission → Review → Decision →  
Registration → IEEEeXplore compatible → Schedule

## AIM2005

[Home](#)  
[Registration](#)  
[Hotel Reservation](#)  
[Program Overview](#)  
[Technical Program](#)  
[Final Program](#) **NEW!**  
[Tutorials](#)  
[Plenary Speakers](#)  
[Panel Discussion](#)  
[Industrial Tour](#)  
[Conference Venue](#)  
[Travel Information](#)  
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[Committees](#)  
[Call for Papers](#)  
[Initial Submission](#)  
[Exhibition](#)  
[Best Student Paper](#)  
[NSF Travel Support](#)  
[Final submission](#)



2005 IEEE/ASME International Conference on  
**Advanced Intelligent Mechatronics**  
24-28 July, 2005, Monterey, California, USA



# Procedures for Final Paper Submission

## STEP 1: Preparation of IEEE eXplore Compatible Manuscript

[IEEE PDF eXpress™](#)

**Papecept**

## STEP 2: On-line Registration

The registration will be available at the time of final submissions and link for registration and over length page charge payment will appear on the paper submission page.

<http://ras.papercept.net/registration/>

## STEP 3: Submission of Final IEEE Xplore-compatible Manuscript

All IEEE Xplore-compatible manuscript submissions must be done electronically through the conference submission web site:

<https://ras.papercept.net/conferences/scripts/start.pl>

## STEP 4: Submission of Copyright transfer form

The copyright transfer process is now fully electronic and integrated in the submission process and hence you no longer need to download and send a signed copy of the copyright form.

1<sup>st</sup> row

AIM '97

AIM '99

AIM '01

AIM 2007  
AIM 2008

AIM 2016

2<sup>nd</sup> row

AIM  
'03  
'05  
'09  
'13



AIM '10

AIM '11

AIM '12

AIM 2014

AIM 2015<sup>10</sup>

3<sup>rd</sup> row

As a flagship conference of

## **IEEE/ASME Transactions on Mechatronics (TMECH)**

AIM 1999 (Volume: 5, [Issue: 2](#), Jun. 2000)

AIM 2001 (Volume: 7, [Issue: 2](#), Jun. 2002)

AIM 2003 (Volume: 9, [Issue: 3](#), Sep. 2004)

AIM 2005 (Volume: 11, [Issue: 4](#), Aug. 2006)

## **AIM Workshops (WS) for TMech Focused Section (FS)**

**Example: FS on Mechatronics for Intelligent Manufacturing**  
(A series of four WS at AIM2013, 14, 15, 16)

## **Presentation of TMECH Papers at AIMS**

## **TMECH-AIM Concurrent Submission**

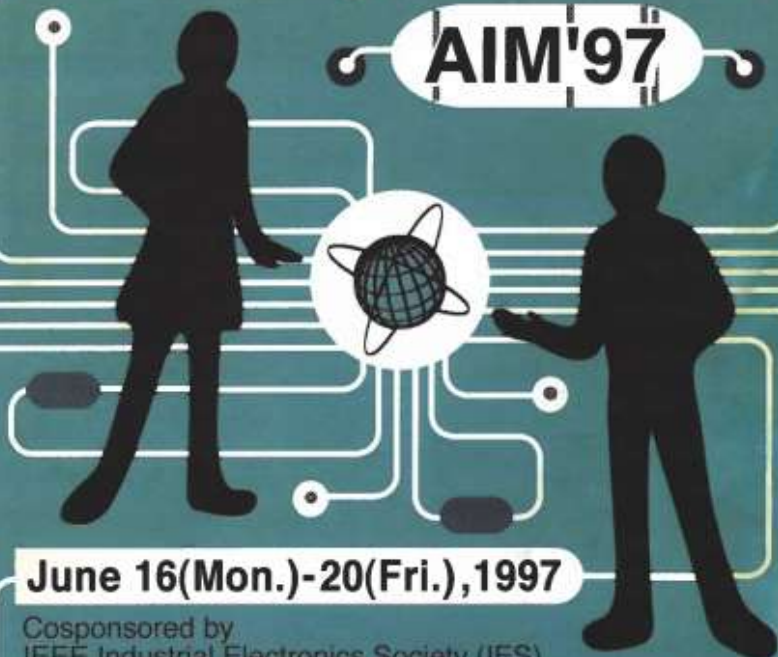


IEEE / ASME



# International Conference on Advanced Intelligent Mechatronics '97

## AIM'97



June 16(Mon.)-20(Fri.), 1997

Cosponsored by  
IEEE Industrial Electronics Society (IES)  
American Society of Mechanical Engineers (ASME)  
IEEE Robotics and Automation Society (RAS)  
Waseda University

# Final Program & Abstracts

Waseda University, TOKYO, JAPAN

**NSF Project DMI-9706642:**  
**1997 IEEE/ASME Advanced Intelligent Mechatronics**  
**PI: Kok-Meng Lee**

### General Chairman:

Hideki Hashimoto  
Institute of Industrial Science,  
University of Tokyo, Japan  
E-mail: hashimoto@iis.u-tokyo.ac.jp



### General Co-Chair:

Kok-Meng Lee  
Georgia Institute of Technology, USA  
E-mail: kokmeng.lee@me.gatech.edu

### Organizing Committee Chair:

Fumio Harashima (University of Tokyo, Japan)

### Organizing Committee:

Rolf Isermamm (Darmstadt Tech. Univ., Germany)  
Masayoshi Tomizuka (Univ. of California Berkeley, USA)  
Toshio Fukuda (Nagoya University, Japan)

### Local Committee Chair:

Shigeki SUGANO (Waseda Univ., Japan)  
Shuji HASHIMOTO,  
Atsuo TAKANISHI,  
Jinichi YAMAGUCHI,  
Koji SHIBUYA (Waseda Univ., Japan),

### Social Chair:

Hisashi OHSUMI (Chuo Univ., Japan)

### Exhibition Chair:

Teruo FUJII (RIKEN, Japan)

### Workshop Chair:

Hajime ASAMA (RIKEN, Japan)

### Technical Tour Chair:

Tetsuo KOTOKU (MEL, Japan), Takashi  
KUBOTA (ISAS, Japan)

### Special Session Chair:

T. FURUHASHI (Nagoya Univ., Japan),  
Toshiyuki MURAKAMI  
(Keio Univ., Japan)  
Seiji HATA (Kagawa Univ., Japan)

### Registration

Kenko

### Finance Chair

Hisato

pan),

Katsuh

### Industry Chair

Takashi

Japan)

### Publication Chair

Naoto

### Publicity Chair

Yoji KURODA (Meiji Univ., Japan)

### Secretaries:

Yasuharu KUNII (Chuo Univ., Japan),

Tetsuo OGATA (Waseda Univ., Japan)

JooHo LEE (Univ. Tokyo, Japan)



We gratefully acknowledge the support of

Foundation for Promotion of Advanced Automation Technology  
Electro-Mechanic Technology Advancing Foundation

### Special thanks to:

Masayuki TAKASU (Tokyo Const., Japan)

Tadafusa TOMITAKA (Sony, Japan)

Makoto ICHIKAWA (Shimizu Const., Japan)

Takashi YOSHIMI (Toshiba, Japan)

Hajime TERASAKI (Sanyo, Japan)

Yasumasa SHOJI (Toyo Eng., Japan)

Takao KAKIZAKI (NTT, Japan)

YOKOTA Kazutaka (Utsunomiya Univ., Japan)

UMEDA Kazunori (Chuo Univ., Japan)

Noriyoshi Kumazawa (Kagoshima Univ., Japan)

# 1997 IEEE/ASME Int. Conf. on Advanced Intelligent Mechatronics (AIM 97).

June 16-20, 1997, Waseda  
University, Tokyo, Japan

## AIM'97 Program

- 4 Plenary presentations
- 150 Technical papers
- 28 Sessions
- 400 Authors or co-authors
- 256 Registrants
- 3 Workshops

## Demographical distribution of authors and co-authors

ASIA	170	EUROPE	103
<b>48.4%</b> Japan	113	<b>29.3%</b> France	33
Korea	33	Switzerland	31
China	12	German	10
Hong Kong	10	United Kingdom	10
Taiwan	2	Finland	5
		Spain	4
<b>N. AMERICA</b>	<b>75</b>	Slovenia	3
United States	65	Italy	3
<b>21.4%</b> Canada	10	Turkey	2
		Hungary	1
<b>Others</b>	<b>3</b>	Lithuania	1

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Seattle, Washington 98195

## LIST OF U.S. PARTICIPANTS FUNDED BY THIS NSF GRANT

**NSF Project DMI-9706642: 1997  
IEEE/ASME Advanced Intelligent Mechatronics  
PI: Kok-Meng Lee**

# AIM '99

Welcome

Final words of appreciation

Looking Forward to AIM'01

Proceedings

Organization

Information

Program at a Glance

Technical Program

Abstracts

Keynote Speakers

Plenary Lectures

Tutorial

Panel Discussion

Round Table Discussion

Session Chair Index

Author's Index

Tours

Registration

Exhibits

Banquet Information

Hotel Reservations

Atlanta Area Information

Author's Instructions

About the Background Image

Archival-final-report

# 1999 IEEE/ASME International Conference on Advanced Intelligent Mechatronics

## AIM'99

co-sponsored by

IEEE Industrial Electronics Society  
American Society of Mechanical Engineers  
IEEE Robotics and Automation Society

In cooperation with

Institute of Electrical Engineers of Japan (IEEJ)  
Japan Society of Mechanical Engineers (JSME)  
Society of Instrument and Control Engineers (SICE)  
Japan Society of Precision Engineers (JSPE)  
Robotics Society of Japan (RSJ)  
Institute of Systems, Control, and Information Engineers  
(ISCIE)

September 19 - 22, 1999  
Renaissance Atlanta Hotel - Atlanta, Georgia  
USA

<http://aimrl.gatech.edu/AIM99/>

### AIM'99 Program

4 Plenary presentations

181 Technical papers

36 Sessions

235 Registrants

- Tutorial
- NSF Panel (Research opportunities in mechatronics)
- Round Table (Infrastructure for mechatronics education)
- Lab Tours (Georgia Tech and GCATT)
- Industry tours (Lockheed, Ford, GM, Lucent)
- Stone mountain boat banquet

### Submission Distributions

Asia:	37.81%
Europe:	26.37%
North America:	35.82%
Total:	14 100%

# AIM '99

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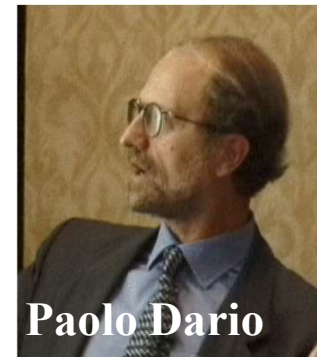
**Audiences  
Opening (Kok-Meng Lee)**



**Peter Will**



**Kazuo Tanie**



**Paolo Dario**



**Toshio Fukuda**

## **Plenary lectures**

**NSF/DARPA** Research opportunities



Kok-Meng Lee AIM'2022 (July 12)

## **Round Table**

Mechatronics education



Kok-Meng Lee AIM2022 (July 12)



# 2001 IEEE/ASME International Conference on Advanced Intelligent Mechatronics (AIM '01) 8-12 July 2001 Como, Italy



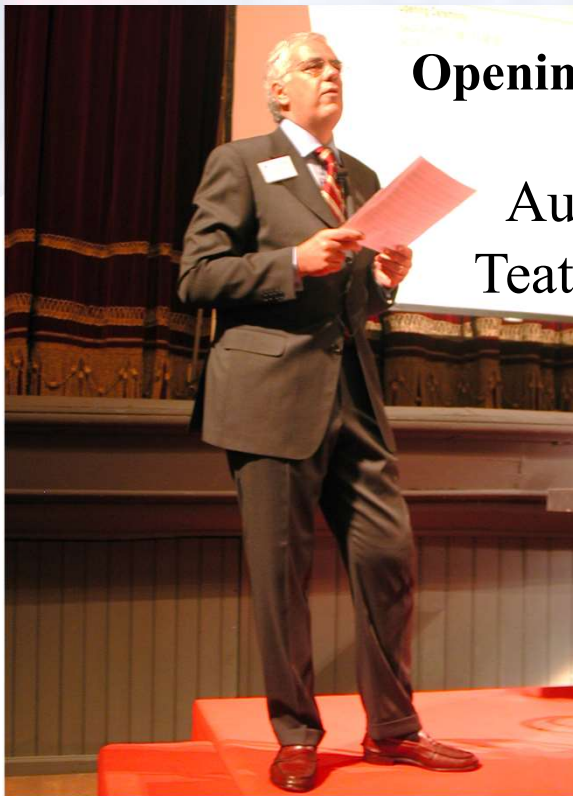
[info@www.AIM01.unina.it](mailto:info@www.AIM01.unina.it) [www.AIM01.unina.it](http://www.AIM01.unina.it)

Co-sponsored by

IEEE Industrial Electronics Society  
IEEE Robotics and Automation Society  
ASME Dynamic Systems and Control  
Division

In cooperation with

Institute of Electrical Engineers of Japan (IEEJ)  
Institute of Systems, Control and Information Engineers  
(ISCIE)  
International Federation of Automatic Control (IFAC)  
Japan Society of Mechanical Engineers (JSME)  
Japan Society of Precision Engineers (JSPE)  
Robotics Society of Japan (RSJ)  
Society of Instrument and Control Engineers (SICE)



Opening (**Bruno Siciliano**)

Audiences at  
Teatro Sociale





## AIM01 Program

4 Plenary presentations

280 (206 Reg, 55 Inv, 19 Ind, 4 videos)

48 Sessions

296 (incl. 75 students, 47 accompanies)

Other highlights:

- Workshop and Tutorial
- Industry tours (STMicroelectronics, Agusta helicopters)
- Farewell Wine Tasting at Teatro Sociale

**Banquet @ Villa Erba in Cernobbio**



**1/2 for Europe and Africa  
1/4 for Asia and Oceania  
1/4 for America**



**Farewell Wine Tasting in the Foyer of  
Teatro Sociale**

**2<sup>nd</sup> cycle**

**Ning Xi**  
AIM2005 General Chair



**Kok-Meng Lee**  
AIM2005  
Program Chair

**Shigeki Sugano**  
AIM2003  
General  
Chair

**Roland Siegwart**  
AIM2007  
General Chair





2005 IEEE/ASME International Conference on  
**Advanced Intelligent Mechatronics**  
 24-28 July, 2005, Monterey, California, USA



# Student Travel Support (NSF)

AIM2005 organizers are proud to have the sponsorship of the US **National Science Foundation** toward travel grants for students from US institutions to attend the conference.

To apply for the travel award, please complete the **Student Travel Request Form**, make ONE pdf file which you must submit through **PaperPlaza** on or before May 20, 2005.

## AIM2005 Best Student Paper Award

Committee:  
 Bruno Siciliano (Chair)  
 Wayne Book  
 Lilong Cai

**Bin Yao**  
NSF Travel.

**Ning Xi**  
General Chair

**Kok-Meng Lee**  
Program Chair

**I-Ming Chen**  
Publication Chair



## Outstanding Reviewer Award

in the 2005 IEEE/ASME International Conference on  
Advanced Intelligent Mechatronics (AIM 2005)

is hereby granted to

**in recognition of his highest quality service, as a  
 program committee member, in reviewing the papers  
 submitted to AIM 2005**

July 26, 2005

Ning Xi  
General Chair  
AIM 2005

Kok-Meng Lee  
Program Chair  
AIM 2005

# IEEE/ASME AIM 2008

**Max Q. H. Meng**  
General Chair

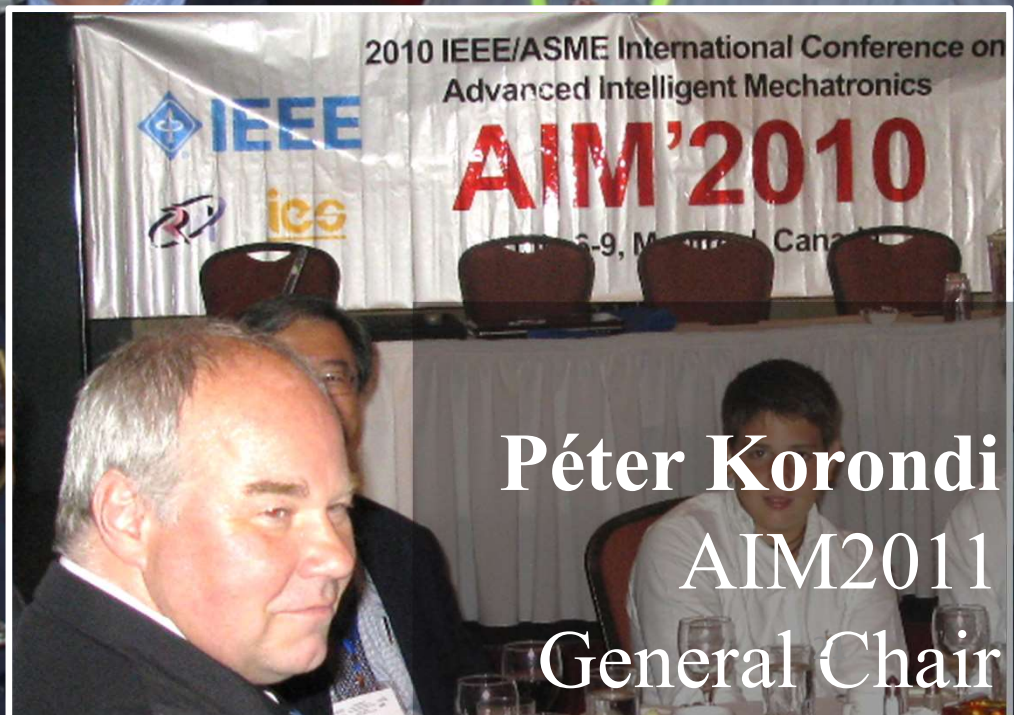


**Michael Wang**  
Program Chair

**Bin Yao**  
AIM2010  
General Chair

**Ren Lou**  
AIM2012  
General Chair

**I-Ming Chen**  
AIM2009  
General Chair



**Péter Korondi**  
AIM2011  
General Chair



**Gursel Alici**  
AIM2013  
General Chair

Kok-Meng Lee AIM2022 (July 12)



**Nicolas Chaillet**  
AIM2014  
General Chair

# Pictures of AIM2014



Plenary ses



banquet

AIM 2015 - Advisory Committee – Report on AIM2014  
July 9, 2015

**AIM2014**  
Besançon  
FRANCE

IEEE/ASME International  
Conference on Advanced  
Intelligent Mechatronics

7 - 11  
July  
2014

IEEE ASME ICM DSC IEEE Robotics & Automation Society



Regular session



Industrial Tour: ALSTOM

Kok-Meng Lee AIM2022 (July 12)

*In memory of*

*Prof. Jang-Myung Lee*

# AIM 2015

IEEE/ASME International Conference on Advanced  
Intelligent Mechatronics(AIM2015)

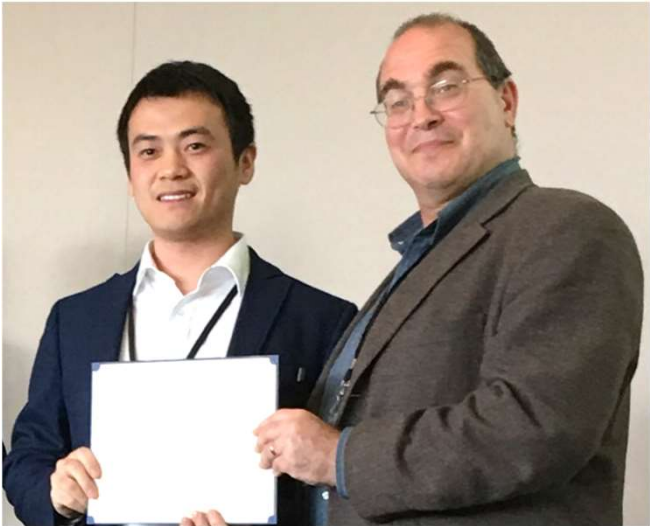
July 7 - 11, 2015, Busan, Korea

**AIM2015 General Chair**





**Jordan Berg**  
AIM2016  
General Chair



General Chair's Report DRAFT  
 2016 IEEE International Conference on  
 Advanced Intelligent Mechatronics  
 Banff, Alberta, CANADA  
 Tues–Fri, July 12–15, 2016  
 Jordan M. Berg, General Chair  
 10 October 2016

**Martin Buss**  
AIM2017 General Chair



**AIM 2017**  
 IEEE International  
 Conference on Advanced  
 Intelligent Mechatronics  
**MUNICH**  
 Germany



**TMECH Management  
and  
AIM2017 Award Committee**

Kok-Meng Lee AIM2022 (July 12)



**Shane Xie**  
AIM2018  
General Chair



**Dong Sun**  
AIM2019  
General Chair



**Jingang Yi**  
AIM2020  
General Chair

**Dong Sun**  
**AIM2019**  
**General Chair**



**Kean Aw**  
**AIM2018**  
**General Co-chair**

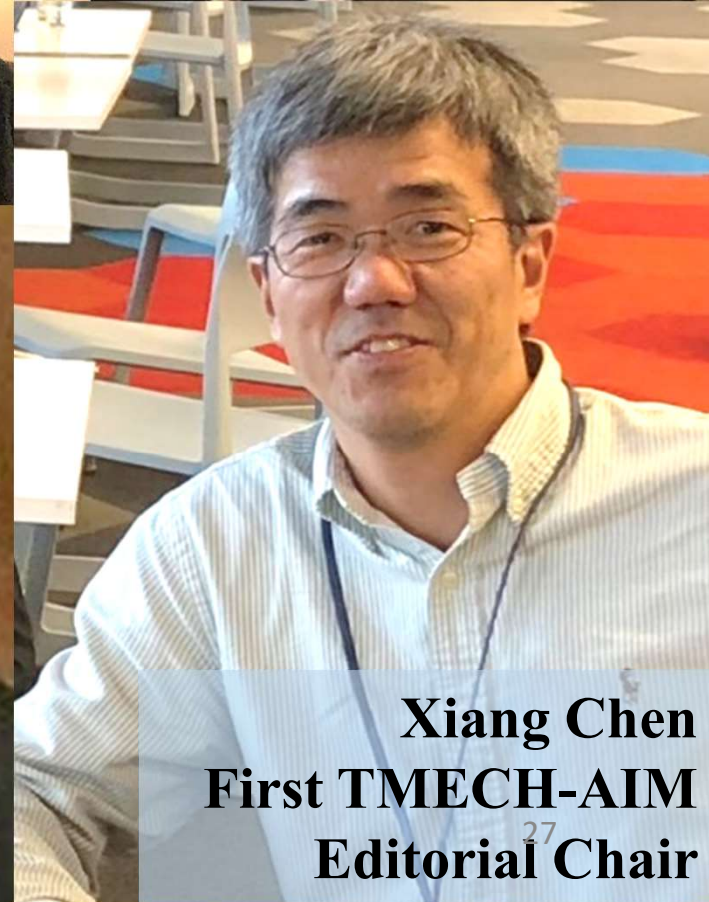
**Hiroshi Fujimoto**  
**First AIM CEB Chair**



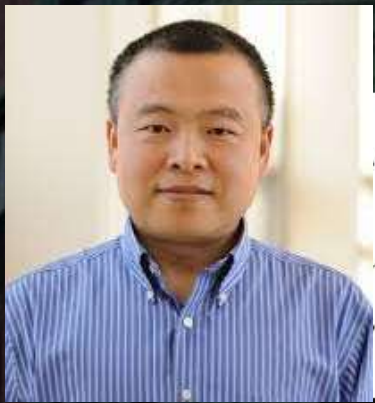
**George Chiu**  
**AIM2010**  
**Program Chair**

Kok-Meng Lee AIM2022 (July 12)

**Kazuhiro Kosuge**  
**AIM2011 Program Chair**



**Xiang Chen**  
**First TMECH-AIM**  
**Editorial Chair**



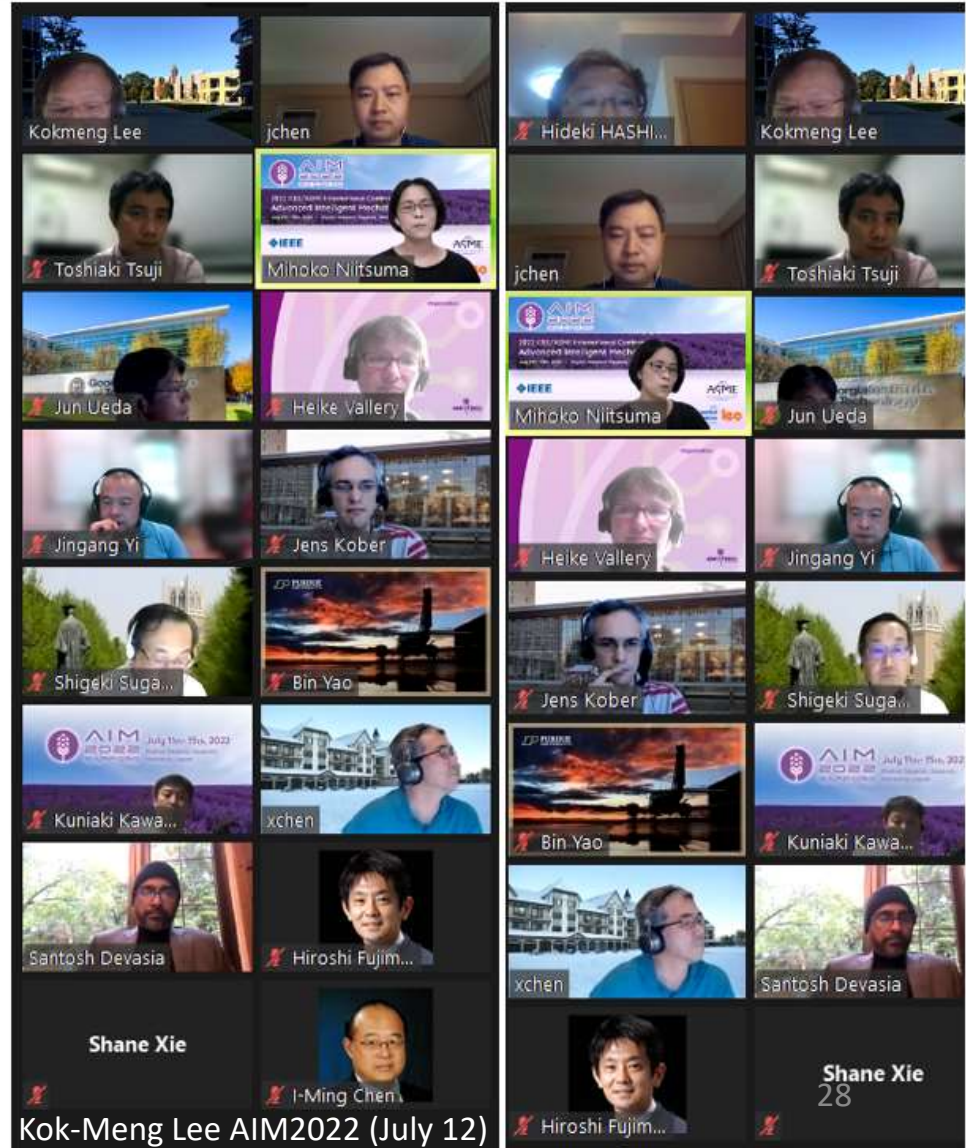
**Jingang Yi**  
General  
Chair



**Heike Vallery**  
General  
Chair



**Advisory Committee Virtual Meeting**



M AIM 2020 Video

Watch later Share



IEEE/ASME International Conference on  
Advanced Intelligent Mechatronics

# Navigating AIM 2020

AIM 2020 is entirely online and taking place over Zoom. All live sessions will take place using Eastern Daylight Time (UTC-4:00). For this year's conference, we will offer several additional resources to enrich the attendee experience. Post-presentation discussions and attendee-to-attendee communication will be supplemented by Slack, whereas a digital alternative [...]

**Thank you,  
the community of  
mechatronics, for your  
ongoing support!**