

- Dec 8. Hike into Lower Fox Canyon.  
 Dec. 15 Rattlesnake Peak  
 Dec. 21 Blat Canyon down + back

1996

- Jan 7 Royal Gorge  
 Jan 13 Royal Gorge hike w. G.R.  
 Feb 4 Fox Creek hike  
 Feb 17 B. Tuzinga hike to Colby  
 Mar 2 Rockclimbing in J. Tree w. Dabney  
 Mar 9 Lower Fox Canyon.  
 Mar 23 B. Tuzinga hike to Colby  
 Mar 30 Dee + dogs + I → Trail Canyon.  
 Apr. 3 - Met Desormeaux at O'Rourke's  
 Apr. 6 - Rode down from Mt Gleason.  
 Apr. 13 → Philadelphia w. D  
 (Quinn in Backpack)  
 May 2 → ~~Dee~~ Dee went to Philadelphia  
 → May 14  
 June 1 → Hike to Fish Fork.  
 June 13 → Jul. 8 N.I., Birmingham, Tondhia  
 July 6 Bailey Canyon.  
 July 20 Rock Creek Canyon - Burkhardt Trail  
 1 Aug. 1 Air Recon. over S. Gabs.  
 1 Aug 17 C → Japan, Osaka → Sep. 7  
 Sep. 29 ~~Ride~~ Hike + Ride → Three Points  
 Sulphur Springs  
 Sep 6 - Hike w. John Fark | S. + A. here  
 Oct 20 - Hike w. Dabney  
 Oct 27 - Hike w. D. Waldo  
 Nov. 10 - Hike w. Garrett + D.W. - Sheep Canyon  
 by Mistake!

# TRAVELS NOW AND THEN

© Christopher Earls Brennan

## NORWAY 1996

Jun 14	Fri	(Commencement) Fly LAX —
Jun 15	Sat	London (-2.10pm) LHR-BFS(3.30-4.30) Stay N.Ireland
Jun 16	Sun	N.Ireland
Jun 17	Mon	N.Ireland
Jun 18	Tue	N.Ireland
Jun 19	Wed	N.Ireland
Jun 20	Thu	N.Ireland
Jun 21	Fri	Fly Belfast-Birmingham Stay in Welford
Jun 22	Sat	Stay in Welford
Jun 23	Sun	Fly London-Oslo-Trondheim (1.40pm-7.40pm)
Jun 24	Mon	Conference
Jun 25	Tue	Conference
Jun 26	Wed	Conference. Afternoon Tour.
Jun 27	Thu	Conference
Jun 28	Fri	Conference
Jun 29	Sat	Fjord Tour begins
Jun 30	Sun	
Jul 1	Mon	
Jul 2	Tue	Breakfast ends Tour. Train to Oslo. Stay in Oslo
Jul 3	Wed	Fly Oslo-London-LAX (8am-9.20am, 2.15pm-)
Jul 8	Mon	ASME San Diego Conference begins.

Tickets must be picked up less than one month after Freq. Flyer booking.



Itinerary for  
Chris and Doreen Brennen

Jun.14, 1996	LAX-London	UA 934	
Jun.15	London-Belfast	BM 88	
Jun.15-Jun.21	Northern Ireland	Tel:	011-44-1648-32311 (Muriel M. Brennen)
		Tel:	011-44-1232-814236 (Mike and Jackie Mills)
Jun.21	Belfast-Birmingham	JE 403	
Jun.21	Welford-on-Avon	Tel:	011-44-1789-750487
		FAX:	011-44-1926-492170 (Christine Anderson)
Jun.22	Forte Posthouse, Guilford, England	Tel:	? (Ugur Tuzun)
Jun.23	London-Oslo	SAS 512	
Jun.23	Oslo-Trondheim	SAS 1350	
Jun.23-Jun.29	ONR Symposium, Trondheim, Norway	Tel:	011-47-7359-1551
		FAX:	011-47-7359-1553
	Staying at Britannia Hotel, Trondheim	Tel:	011-47-7353-5353
		FAX:	011-47-7351-2900
Jun.29-Jul.3	en route, Trondheim-Oslo		
Jul.3	Oslo-London	BA 761	
Jul.3	London-LAX (Arr.5.50pm)	UA 935	

Invited lecture at 21st ONR Symposium on Naval Hydrodynamics, Trondheim, Norway, Aug. 1996.

Brennen, C.E., Reisman, G.E. and Wang, Y.-C. (1996). Shock waves in cloud cavitation. Proc. 21st ONR Symp. on Naval Hydrodynamics, 756-771.



*Trondheim, Norway*



*Trondheim and Bergen, Norway*



*Norway*





Norway



Norway



Norway





Norway



Ireland



Ireland





*Ireland*

[Back to table of contents](#)

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*Last updated 7/30/99.  
Christopher E. Brennen*



# TRAVELS NOW AND THEN

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## JAPAN 1996

### Aug 17 Sat

UA 817, LAX - Osaka, 11.15am.

### Aug 18 Sun

Arrive Osaka Kansai, 3.20pm.

Met by Prof. Y. Tsujimoto

Prof. Y. Tsujimoto Tel.: 81-06-850-6165, FAX: 81-06-850-6212.

Prof. Y. Tsujimoto, Home Tel.: 81-727-24-5534

email: [tujimoto@me.es.osaka-u.ac.jp](mailto:tujimoto@me.es.osaka-u.ac.jp)

Stay at Machikaneyama Kaikan, Osaka Univ.

### Aug 19 Mon

Visit Osaka U.

Lecture on Pump Rotordynamics

Stay at Machikaneyama Kaikan, Osaka Univ.

### Aug 20 Tue

Tsujimoto and I drove from Osaka to Akashi.

Took the cheaper car ferry (rather than Akashi bridge) from Akashi to Awaji island and on to the Naruta narrows bridge to see the vortex shedding as the sea flow through the narrow Naruto straits. Also visited the museum and took a boat tour out to see the vortices.

Stayed at hotel (Komatsushima?) near Naruto.



*Akashi-Awaji bridge.*



*Naruto narrows bridge.*



*Vortex in Naruto narrows.*



*Vortex in Naruto museum.*





徳島県と淡路島を結ぶ夢のかけ橋「大鳴門橋」が建設されたことを記念して大鳴門橋架橋記念館（エディ）が建設されました。大鳴門橋完成に至るまでの記録や、徳島県の変遷を紹介するコーナー、海底探検やゆかいに遊べるパノラマ展望台など楽しいことがいっぱい詰まったエキサイティングバベイです。



〒772 鳴門市鳴門町土佐泊浦字福池 TEL. 0886-87-1330











エディタワーが魅了する

### 徳島県コーナー

徳島に数ある名所・観光地、美しい自然、永い歳月の間つちかわれてきた郷土芸能、風土、特産品などをマイコン、ビデオ、写真などを使ってあらゆる角度から楽しく紹介。

3F



2F

### 巨大な人工うず

海の底から、うず潮を見ている緊固気にさせてくれる、高さ7m、直径3.5mのエディタワー。海の底から見る人工うずは迫力満点。  
また海底で演出されるうずのメカニズムを大型テレビで徹底解説。

### 大鳴門橋コーナー

最も美しい海峡、鳴門海峡に雄大なうず潮を眼下にみる人類の英知の結晶「大鳴門橋」。その完成に至るまでの記録をパネルや模型、実際に使われている材料や道具の実物などで紹介。

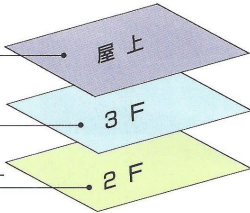
3F

### 大鳴門橋架橋記念館の概要

- 建物／鉄筋コンクリート3階建  
敷地面積 1,973㎡、延床面積 約2,650㎡
- 駐車場／約270台、延面積 約9,000㎡

#### ● パノラマランド

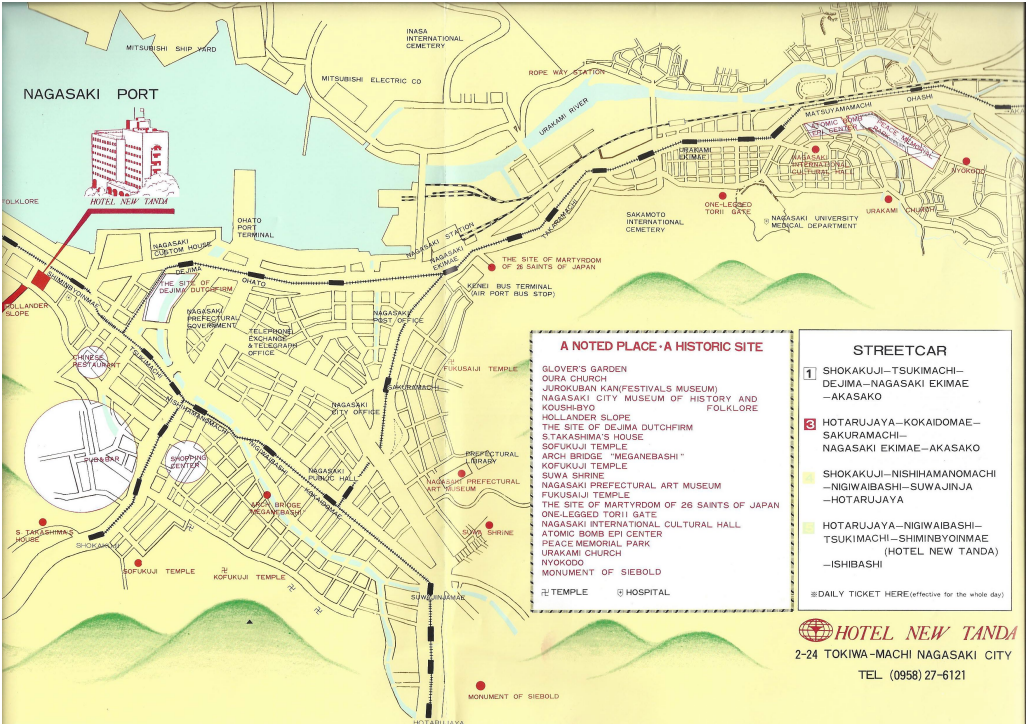
- 大鳴門橋コーナー
- 徳島県コーナー
- 多目的ホール
- 海底探検コーナー
- プレイコーナー
- 自然エネルギーコーナー







**Aug 21 Wed**  
Drove back to Osaka.  
Visit Osaka U.  
Fly Osaka to Nagasaki, ANA 169, 6.40pm-7.50pm.  
Stay in Hotel New Tanda, Nagasaki (Tel: 81-958-276121)



**Aug 22 Thu**

9.20: Mr. Oshima will pick me up at hotel and drive to Mitsubishi, Nagasaki.  
10.00-11.50: Tour of Nagasaki Res. and Devel. Ctr 12.00-13.00: Lunch  
13.15-14.30: Cloud Cavitation Lecture. 14.30: Move to Nagasaki Expt. Tank  
15.30-16.00: Tour of Nagasaki Experimental Tank.  
16.00-17.00: Discussion of cavitation.  
18.30-21.00: Dinner  
Tetsuji Hoshino, Dr.Sasazume  
Hoshino: Tel: 81-958-46-4661, FAX: 81-958-45-7701  
Hoshino: email: hoshino@ngs2.mhi.co.jp  
Stay in Hotel New Tanda, Nagasaki (Tel: 81-958-276121)

**Aug 23 Fri**

Train from Nagasaki to Fukuoka: 9.00am-10.58am L-Express (Kamome 10).  
9.00am-10.58am L-Express (Kamome 10) (Hoshino will have ticket.)  
Inoue will pick up. Check in hotel. 11.30-12.30 Lunch.  
13.00 Visit Kyushu Univ.  
13.30-14.30 Cloud Cavitation Lecture.  
15.00-17.00 Laboratory Tours.  
18.00-20.00 Dinner.  
Prof.Inoue, Furukawa, Hayami (ME)  
Inoue: Tel: 81-92-641-1101 X5538 FAX: 81-92-641-9744  
Inoue: email: ino@mech.kyushu-u.ac.jp  
Prof.Nakatake, Ando in Naval Architecture  
(Prof. Tsukamoto, Kyushu Inst. of Tech.).  
Stay in Sun Life Hotel near Hakata St. (81-92-473-7112)











August 23 (Fri.)

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SCHEDULE IN KYUSHU UNIVERSITY

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13:30-14:30 Seminar: "Cloud Cavitation Dynamics and Acoustics"

15:00-17:00 Laboratory tours in Department of Mechanical Engineering

Liquid-Gas Flow, Aerodynamic Noise of Fan, etc. by Prof. Fukano

Two-phase flow in Pump, Darius Hydro-turbine, etc. by Prof. Furukawa

Axial compressor rotor, Lock-in of Vortex-shedding by Micro-excitation

by me

18:00-20:00 Dinner

Chinese restaurant "Hassen-kaku"

Participant:

Kuniharu Nakatake, Professor

Dept. of Naval Architecture and Marine System Eng., Kyushu Univ.

Jun Ando, Associate Professor

Dept. of Naval Architecture and Marine System Eng., Kyushu Univ.

Tohru Fukano, Professor

Dept. of Mechanical Science and Engineering, Kyushu University

Masao Watanabe, Associate Professor

Dept. of Mechanical Science and Engineering, Kyushu University

Akinori Furukawa, Professor

Department of Intelligent Machinery and Systems, Kyushu University

Yoichi Kinoue, Associate Professor

Department of Intelligent Machinery and Systems, Kyushu University

Masahiro Inoue

Dept. of Energy and Mechanical Engineering, Kyushu University

Hiroshi Hayami, Professor

Department of Thermal Energy Systems, Kyushu University

Mitchihiro Nishi, Professor

Dept. of Mechanical Engineering, Kyushu Institute of Technology

Hiroshi Tsukamoto, Professor

Dept. of Mechanical Engineering, Kyushu Institute of Technology

Koichi Yoshida, Associate Professor

Dept. of Mechanical Engineering, Kyushu Institute of Technology

Kazuhiro Tanaka, Professor

Dept. of Mechanical System Eng., Kyushu Institute of Technology

*DAI FURUKAWA, now at Whittle.*

---

**Aug 24 Sat**

Drive to Aso with Inoue, wife and daughter. 10.30am: Arrive Aso.

Visit crater of Aso with its concrete shelters.

My hike to summit of Nakadake.

Descended along trail to top of ropeway.

16.00: Pick-up at ropeway stop of Sensuikyo where I met Inoue again.

Drive to hotel outside Aso area.



*With Inoues at Mount Aso*



*Mount Aso crater*



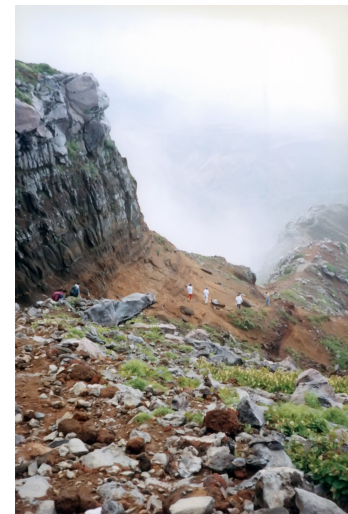
*Concrete shelters on Mount Aso*



*Mount Aso crater (Nakadake).*



*Mount Aso crater (Nakadake).*



*Hiking trail to summit of Nakadake.*





*Summit of Nakadake.*



**Aug 25 Sun**

Drive on outer rim of Aso (Gairinzan) incl. Daikanbo and Kuji.

Drive to Kumamoto airport.

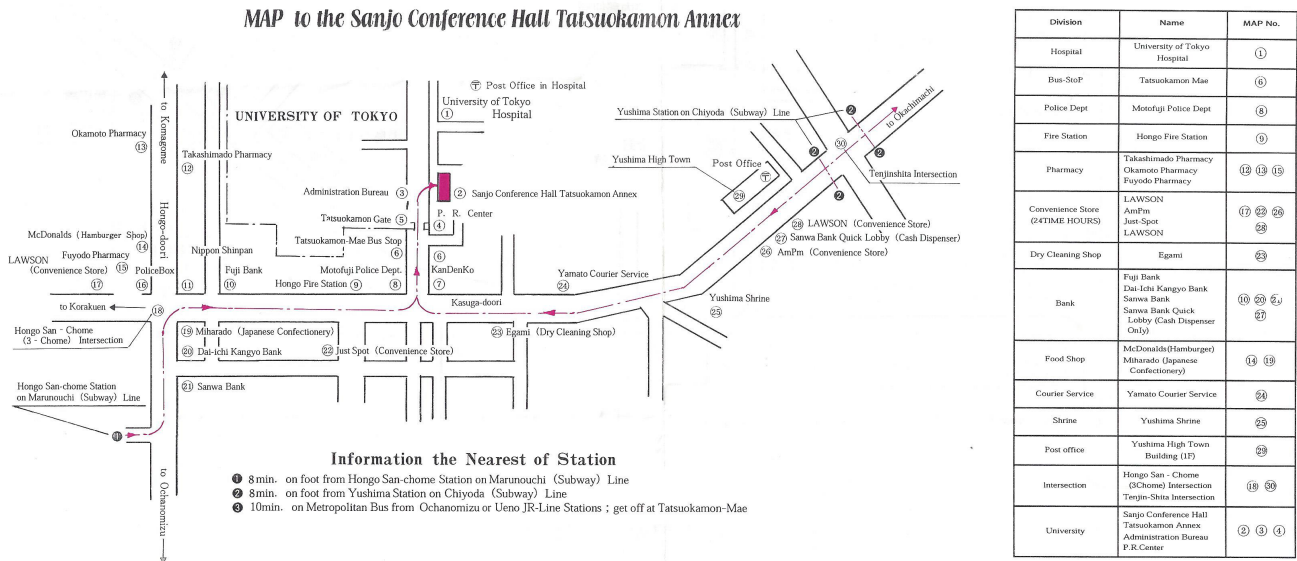
Fly Kumamoto to Osaka Itami, JAC 696, 6.05pm-7.10pm.



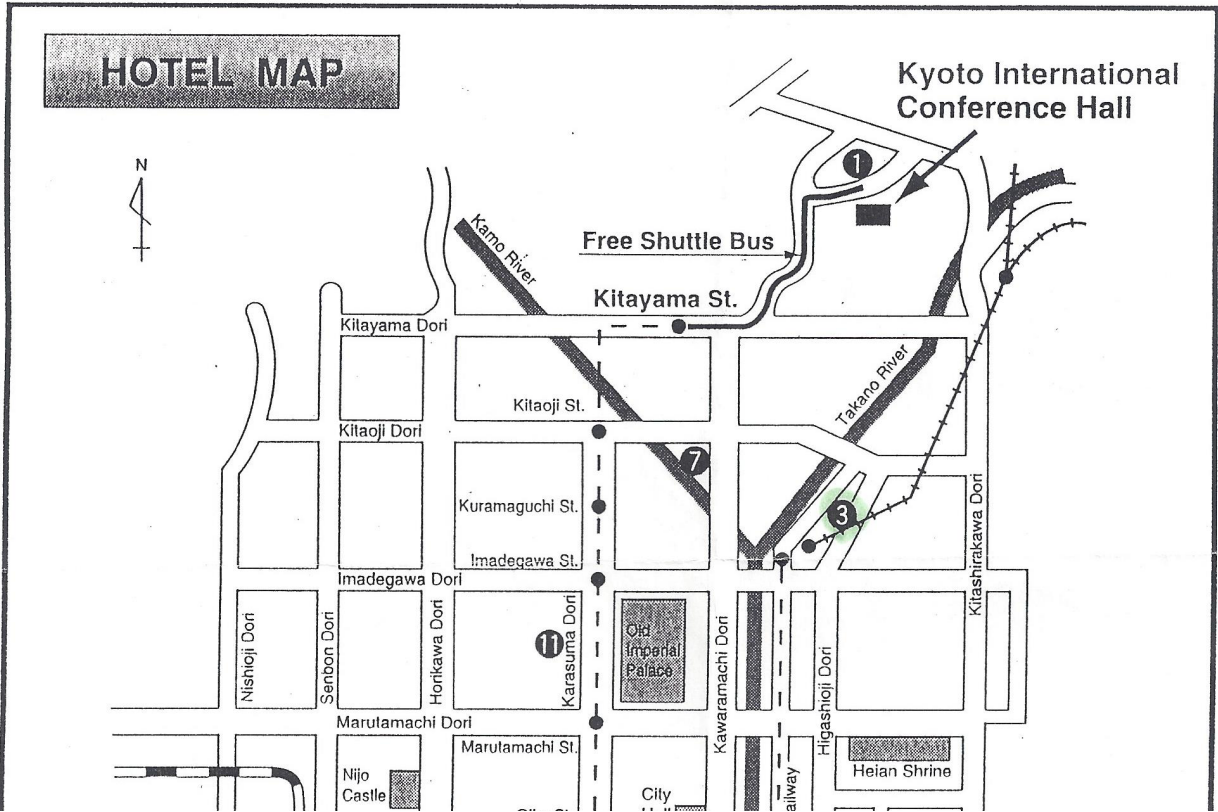
Tsujimoto will meet me, have dinner and take me to Kyoto hotel.  
Stay: Holiday Inn, Kyoto (Tel: 81-75-721-3131)

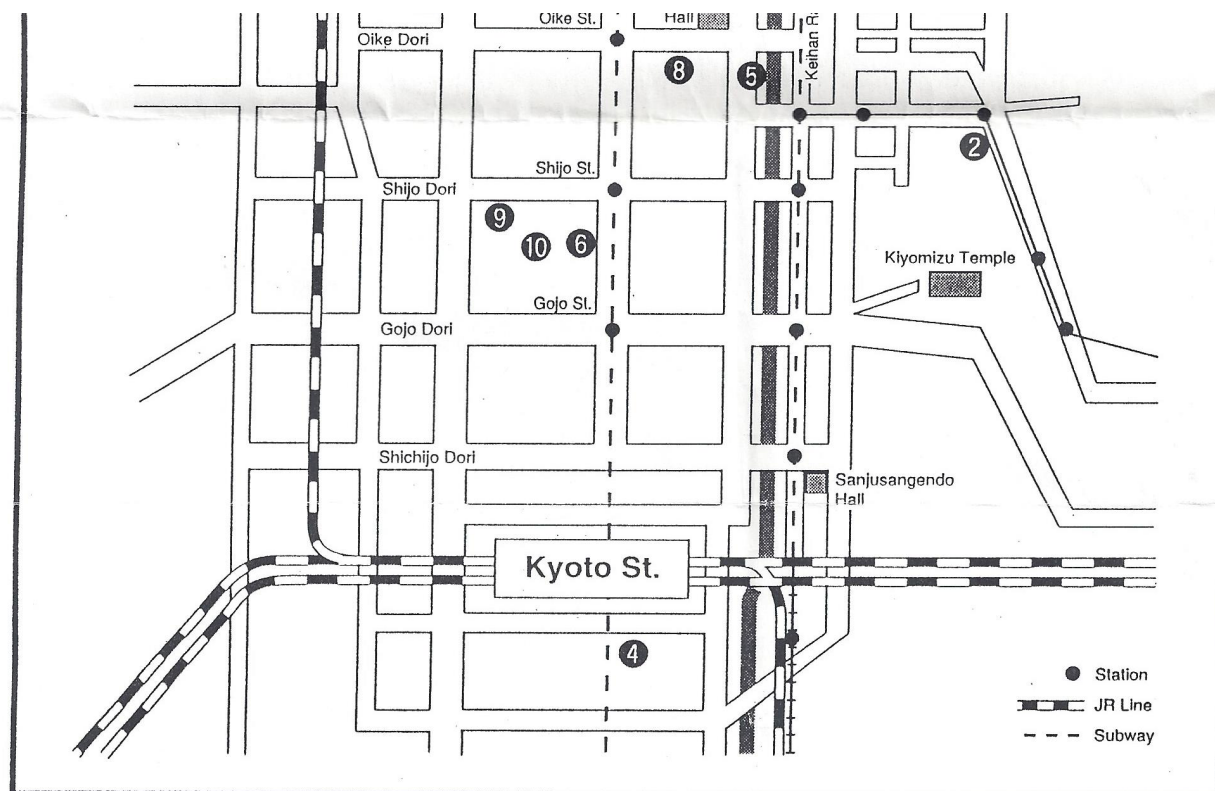
**Aug 26 Mon**  
IUTAM, Kyoto  
Tel: 81-75-753-5079, FAX: 81-75-752-5296  
email: ictam@strsun1.kuciv.kyoto-u.ac.jp  
Reception in KICH, 19.00-21.00 (Buffet dinner)  
Stay: Holiday Inn, Kyoto (Tel: 81-75-721-3131)

IUTAM Congress, Kyoto, Japan, 1996 (2 presentations).



HOTEL ACCOMMODATION





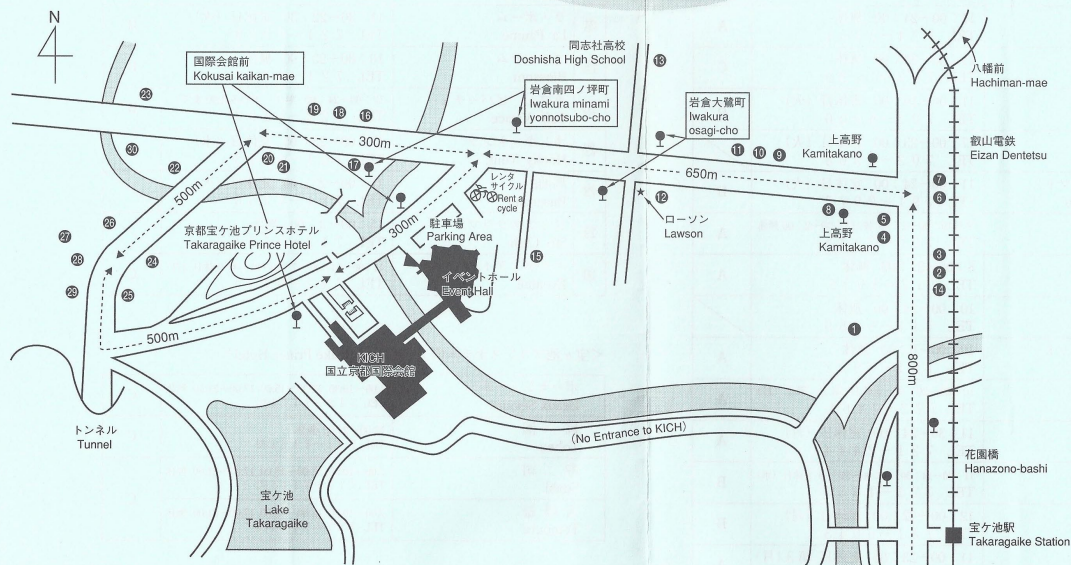
- ① Takaragaike Prince Hotel
- ③ Holiday Inn Kyoto
- ⑤ Kyoto Royal Hotel
- ⑦ Kyoto Prince Hotel
- ⑨ Hotel Oaks Kyoto Shijo
- ⑪ Kyoto Palaceside Hotel

- ② Miyako Hotel
- ④ Hotel Keihan Kyoto
- ⑥ Karasuma Kyoto Hotel
- ⑧ Hotel Gimmond
- ⑩ Maruko Inn Kyoto



Restaurants and coffee shops  
around the Kyoto International  
Conference Hall (KICH)

レストラン・喫茶店ガイド



City  
Bus stop  
バスストップ

Coffee Shop  
Western  
Chinese  
Japanese

国立京都国際会館内  
Kyoto International Conference Hall

レストラン「グリル」	1 F
Restaurant "Grill"	1 F
軽食堂「スナック」	4 F
Restaurant "Snack"	4 F
昼食会場「さくら」	B F
(会議に応じてオープンします) Restaurant "Sakura" "Swan"	B F
(Open on a provisional basis)	

京都宝ヶ池プリンスホテル内  
Takaragaike Prince Hotel

仏蘭西料理「ボーセジュール」	
French Restaurant	
"Beaux Séjours"	
中国料理「桃園」	
Chinese Restaurant	
"Tohen"	
寿司・天婦羅	
Sushi・Tempura	

- 1 たかの川  
Takanogawa

2 笹 喜  
Sasaki

3 トニーローマ  
Tony Roma's

4 フォルクス  
Volks

5 三田屋  
Sandaya

6 キウイ  
Kiwi

7 ロンシャン  
Ronshan

8 イタリアトマト  
Italian Tomato

9 すかいら〜く  
Sky Lark

10 マクドナルド  
Mc Donald's

11 アンジュ  
Ange

12 グリーンスポット  
Green Spot

13 グリルタカラ  
Grill Takara

14 虎角  
Kokaku

15 じんさい  
Junsai

16 キングスワン  
Kingswan

17 八十八驛  
Todoroki

18 花れん  
Karen

19 王 将  
Onsho

20 ドルフ  
Dorf

21 ニフティ  
Nifty

22 ラヴィータ  
Lavita

23 串 楽  
Kushikiku

24 ラ・パーム  
La Paume

25 ブロッサム  
Blossom

26 カフェビバーチェ  
Café Vivace

27 ホンキートンク  
Honky Tonk

28 馬仙山  
Basenzan

29 フィフスクラブ  
5th club

30 エヴァンタイル  
Eventail

1996. 8. 1 現在 (As of 1996. 8. 1)







# SHUGAKUIN IMPERIAL VILLA



Shugakuin is derived from a Shugakuji which was constructed in the Middle of Heian Period (10th century). The temple was never rebuilt, only the name of the villa was designed by the architect Gomizuno who was the 107th Emperor Goyozei. He died at the age of fifteen. It had been customary for the emperor to be selected from among the nobles. Tokugawa Hidetada (1603-1656), however, arranged for his son Iyeyasu (later Tofukumon-in) to be the emperor's consort and the empress. In 1603, years later the Emperor died, giving the throne to his son, and began planning his villa for his days in leisure. Looking for a site for his garden, he finally found it and set about construction and finished in 1659. There

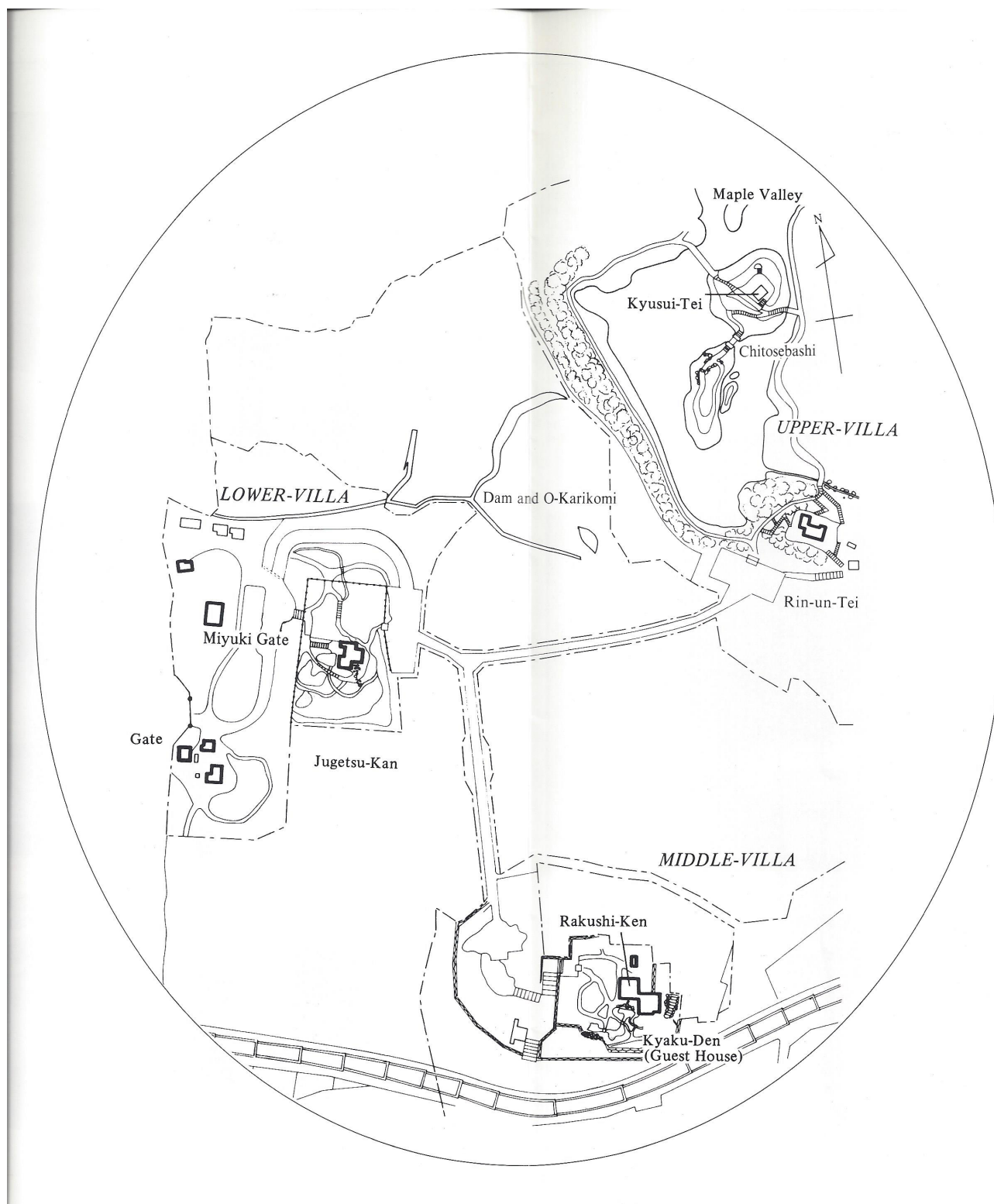
was a time when the Villa was not used and fell into disrepair. In 1822 the government started to repair the Villa and completed it in 1824.

## ●SUMMARY

The total area of the Villa is about 545,000 square meters (approximately 133 acres). The Villa was situated at the foot of Mt. Hiei to take advantage of the extraordinary beauty of the area with its fine views of the city and distant mountains to the north and east. The panoramic view together with the distant and adjacent forested slopes of the mountains and hills serve as a background for the garden. Thus the garden looks larger than it actually is. A landscape garden of this kind of called Syakkei (borrowed scenery). Shugakuin is considered one of the finest examples of this technique. The Villa consists of three parts, each one lies on a different elevation, and therefore we have the Upper, Middle and Lower villa; Originally the Middle villa was not a part of the complex. Ten years after the construction of the original Villa, it was built as a residence for the princess Akenomiya (the eighth daughter of the former Emperor

Gomizuno), and later the Rinkyuji nunnery was added here so that she could become a nun after the former emperor passed away. The nunnery supports itself now.

IMPERIAL HOUSEHOLD AGENCY



**Aug 27 Tue**

IUTAM, Kyoto

Stay: Holiday Inn, Kyoto

**Aug 28 Wed**

IUTAM, Kyoto

Afternoon excursion to rapids, 13.30-18.30

Stay: Holiday Inn, Kyoto

**Aug 29 Thu**

IUTAM, Kyoto

Banquet, 19.00-21.00



Stay: Holiday Inn, Kyoto



*Kiyomisaderu, Kyoto.*

**Aug 30 Fri**  
IUTAM, Kyoto  
Travel to Fuji.  
Stay at Fuji.

**Aug 31 Sat**  
Climb Fuji.  
Stay at Fuji.



*Mount Fuji trailhead.*



*Mount Fuji slope.*



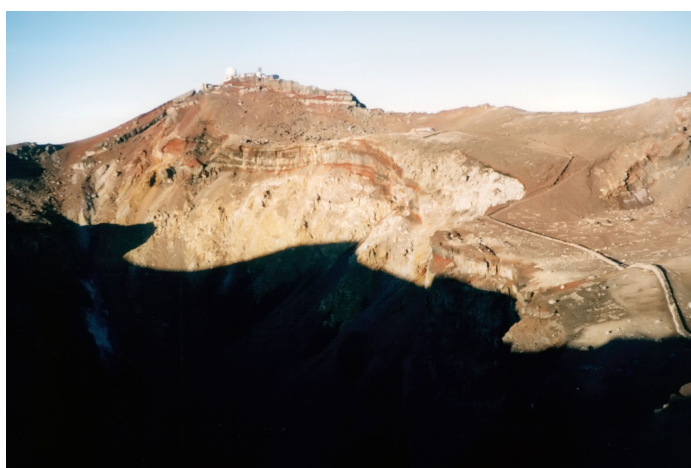
# *Mount Fuji Lodge.*



*Sunrise from summit.*



*Mount Fuji summit.*



*Mount Fuji crater.*



*Looking down.*

So it was that I took a taxi to the Kyoto Central Station and was soon speeding along at close to *160mph* on the shinkansen bound for Fuji City, about *200* miles to the east. The Kodama or limited express (for Japanese trains of various degrees of expressness are given useful identifiers) arrived exactly on time at *10.52am* at Shin-Fuji station. There I was met by my friend Yoshi Tsujimoto and one of his students, Masayuki Tanada, who had promised to carry both of us oldies to the summit of Fuji. Or so we teased him; in reality he was the very essence of quiet civility.

From Shin-Fuji station it is an increasingly tortuous drive of some two hours through the town of Fujinomiya and up the lower slopes of Mount Fuji. You start in the typically dense built-up area around Fuji City and Fujinomiya and rise gently through crowded, rolling farmland. Soon, however, this gives way to dense semi-tropical Japanese forest of low trees and a thick ground-covering of bamboo. Higher up this forest begins to change with increasing numbers of larger pine trees and a thinning of the bamboo. Eventually the bamboo disappears completely to leave an attractive highland forest of firs.

Our goal was the highest point reachable by road on the south side of Fuji, namely the mountain station of Shin-go-gome (‘new fifth station’), high on the steep sides of the great volcano. By way of background, know that Fuji is a sacred mountain topped by a shrine. Pilgrims who begin at the base of the mountain are aided by ten stations roughly equidistant along the climb to the top. There are several routes up the mountain each with its own chain of ten stations. However, these days most hikers with a less devotional objective, drive as far as they can up the mountain. Roads on the north side and on the south side climb to just over *7500ft* where the fifth station, Go-gome, is located. The most popular route is up the Kawaguchi-ko trail from the Go-gome trailhead (*7592ft*) on the north side of the mountain. We followed the Fujinomiya trail that begins at Shin-go-gome (*7874ft*), the new fifth station, on the south side.

It was mid-afternoon before we reached the large parking area at Shin-go-gome and managed, somewhat fortuitously, to find a parking space. The weather had been very cloudy and misty as we drove up to this point and we had resigned ourselves to very limited visibility during the climb. But, as we readied our equipment in the parking lot, we began to catch glimpses of blue sky and sunshine above us. Buoyed in spirit we began our climb upwards from the crowded fifth station at about *2.00pm*. It is only a short climb up to the sixth station, Roku-gome, the intervals between stations being quite irregular in places. The sixth station



also coincides with the tree line so that the terrain from here on was everywhere volcanic rock strewn with ash and geologically recent ejecta. We made steady progress up the rough and worn trail. Soon we were in bright sunshine with an uninterrupted carpet of clouds below us. The famously regular shape of Fuji was evident as the sun cast its shadow on the parchment of the top of the clouds. But the bright sun also meant that we were soon sweltering in the heat. We could see Shichi-gome, the seventh station, above us and it seemed deceptively close. But it took a depressingly long time to get there and we were struggling when we arrived at *10,000ft* and Shichi-gome about *4.00pm*.

Our plan was to climb some distance during the daylight hours and then to find a place to stay the night so that we could climb the last part before dawn the next day. In doing so we would be following the traditional timetable for climbing Mount Fuji. The idea is to reach the summit in time to enjoy what the Japanese call ``goraiko'', the semi-mystical experience of viewing the sunrise from the summit.

In theory it is possible to stay overnight in one of the many lodges on the mountain; almost all the stations have such a lodge. They consist of three or even four levels of shelves installed in a moderate, single storey hut. Hundreds of hikers are packed in like sardines on these shelves equipped with heavy cover-blankets. As we were climbing toward Shichi-gome, we heard word that many of the lodges were closing or had already closed for the winter. Shichi-gome lodge still seemed open for business. But it was very small, already crowded and a very long way from the summit for a pre-dawn hike. We decided to risk our chances further up the mountain since we still had a couple of hours of daylight.

And so we pressed on. It was harder going now, both rougher and steeper. We had to pause quite often to get our breath in the rarefied air and so, though the large eighth station did not seem very high above us, it took a long time to reach it. At one rest stop, we had confirmation of the rumors we had heard further down the mountain. The lodge at the eighth station, Hachi-gome, was full; the proprietor could not pack another single soul into his establishment. This was depressing since we also had confirmation that all the higher lodges (mainly those on the summit) were closed for the season. But almost immediately, we had some more encouraging news. Apparently, there was another Hachi-gome lodge just a short distance around the mountain. This was on one of the other, less popular trails; apparently it was still open and even had some space left for the night. And so we pressed on in a somewhat more encouraged mood. Light was already beginning to fade as we reached the large and full Hachi-gome lodge and trudged past onto the cross-mountain trail that would take us about a half-mile to the east. There, at *11,150ft*, we found the other Hachigome and, with great relief, purchased three of the last available spaces. The fact that the cost was a highly inflated \$60 per person seemed of little consequence compared to the alternative.

And so we checked in to the Akaiwa Hachigome or ``Eighth Stage Red Rock Lodge''. In its literature it advertizes itself in these lyrical terms:

- *You can be relaxed since it is not crowded.*
- *You can enjoy the best sunrise from the room.*
- *You can climb faster since the Gotemba trail is less crowded.*
- *You can have as much curry and rice as you want for dinner.*
- *Please enjoy wonderful Fuji with us. We are waiting for you.*

though, of course, in Japanese, not in English. A few of the other inmates, spoke a little English, but otherwise I had to rely almost exclusively on my friend Yoshi.

As in all Japanese dwellings, we took off our shoes in the entrance way, in this case a small, sunken open space inside the doorway. Then, in our stocking feet, we stepped up onto the lowest of the carpeted platforms. The last few spaces which we had felt fortunate to claim were on the third and highest platform, with just about three feet of headroom below the wooden roof. To reach our precious space, it was necessary to climb up onto the second platform, carefully choosing our footing to avoid stepping on sleeping bodies and then to crawl over more bodies to the roughly *6ft* by *2ft* space that each of us had been allotted. But it was warm, comfortable and clean. And there was a sense of camaraderie and of shared adventure that made the atmosphere friendly and hospitable.

After stowing our belongings, we climbed down again to enjoy the evening meal of curry and rice, prepared in two great iron pots bubbling over the stove in the sunken hallway. We washed it down with cups of hot tea and it tasted marvellous after our exertions of the day. Crowded around the three small and low tables set up to serve as a temporary eating area, conversation was inevitable. We met the three young Tokyo women who got the very last places just after us and beside whom we would spend the night. I also had a publicly entertaining conversation with a very old Japanese women who had somehow managed to climb this far despite her arthritis and her bent frame. Later Yoshi related to me what he remembered of the banter over the dinner table. The old lady was from Tokyo and was climbing Fuji to visit a temple in which the mummy of a monk is kept (unfortunately that temple was closed). She was also a vegetarian and claimed that all the confusion in today's Japan came from eating meat. She was the soul of the party and, since I was the first foreigner she had ever talked with, she had a number of observations on me and on the circumstances in which the crowd found great amusement. Though her wry comments were lost on me, I felt I knew her thoughts when she asked for my hand and gently stroked it. In that quite public moment, I had a strange sense of quiet humanity and peaceful compassion. Seconds later the feeling was gone and the amiable chatter resumed. Later, when the conversation ebbed, we retired to our assigned spaces on the shelves to try and get some sleep before our early morning

start. But just before the room lights were extinguished, I was moved to glance down to where the old lady was sleeping by the door. There she lay curled up without mattress pad, bed cover or head rest.

We arose about *4.00am* and made preparations for a pre-dawn departure. During our brief sleep, I and others had been awakened by the obvious distress of one of the other guests. He was having difficulty breathing and even the oxygen bottle that his friends had brought did not help very much. Eventually, the whole group dressed and left in order to get this man back down the mountain to medical attention. It was dramatic testimony to the effects that altitude (in this case *11,150ft*) can have on some people. As we were rising, we discovered that Yoshi was also feeling some of the effects of the altitude including headache and nausea. He decided to remain in the lodge while Tanada and I went to the summit. It was cold and dark as we set out, now following the Gotemba trail. Most of the other guests had a similar plan; while a few left before us, most followed and, looking back, we could see a twinkling line of flashlights wending its way up the mountain. The trail is well travelled and therefore not difficult to follow in the dark; the main problem is the rough and loose footing which can cause an occasional stumble in the dark. It took about *1hr* for us to reach the torii gate which marks one's arrival at the crater rim at about *12,000ft*. It was lightening fast and so, along with crowds of others, we found a good vantage point from which to await the *6.00am* sunrise. And it was quite spectacular though too cold to stand and watch for long. Soon, we were off again, hiking around toward the west side of the crater rim aiming for the *12,385ft* summit of Mount Fuji. Unfortunately, a most unsightly weather station has been built right on top of the summit; this is not only an eyesore but it also spoils that rich excitement normally experienced in reaching a raw, high peak. Nevertheless, it was a moment of accomplishment for I had been through many adventures since I first dreamed of climbing Mount Fuji. There seemed a rightness to the moment and a sense of completion, of closure. There would be other dreams and other trials but they would be part of later chapters.

In the annals of the vulcanologists, Fuji is a young volcano whose oldest lava is only *8000* years old. It has been dormant for almost *300* years, the last eruption in *1707* occurring not in the impressive summit crater but much lower down on the southeast side of the mountain. This eruption produced a still-recognizable crater and a side cone known as Hoei-san that we would later pass during our descent. Though dormant recently, Fuji has been very active during the historical period; for example, *18* eruptions were recorded during the period from *781AD* to *1707AD*. Despite its recent inactivity, the crater at the summit is still an impressive *300ft* deep and almost half-a-mile across. Its interior walls are almost everywhere vertical and are highlighted by slashes of the stark volcanic colors, red, yellow and black.

There are other, less obnoxious buildings on the summit. The ancients clearly had a more refined sense for they built their shrine in a discreet and unobtrusive site on the rim opposite the summit. Indeed, the Japanese records tell of pilgrimages being made to the summit over a thousand years ago. The earliest recorded ascent was in the *870s* and shrines were built near the summit in the *1100s*. Today the Sengen shrine, where the cherry blossom is worshipped, is a most ecumenical establishment, tending to the needs of climbers from all around the world. Established climbing routes to the summit were first created by monks of the Shugendo sect. Initially, the most popular route was the one that we followed; it starts far below at a shrine in Fujinomiya. The stations and lodges appeared about *1430*, first on the Fujinomiya trail and later, in the *1600s*, on the most popular route today, namely that on the north side. Until about *100* years ago, only monks and priests climbed Fuji; indeed women were forbidden to do so until *1872*. Now, during the official, open season in July and August nearly *200,000* people set off for the summit. On busy weekends, this can mean an almost continuous queue of people on the most popular trails.

One of the popular rituals is to purchase a wooden staff or "kongozue" and have it branded with the name of each station that you visit. All of the stations feature a brazier and branding irons for this purpose. A long queue of people were waiting at the Sengen Shrine on the summit for that particularly sought-after brand. Despite the queue, the shrine is a dignified and busy place; only the NTT telephone is incongruous.

After circling the crater, we began our descent and made rapid progress down the Gotemba trail by which we had ascended in the pre-dawn hour. Only one incident of note occurred. About *500ft* above the Akaiwa Hachi-gome lodge, we encountered the last of the previous night's guests, making very slow but steady progress up the mountain. It was the old lady using two canes to aid her balance on the rough trail. She seemed oblivious to our approach, intent on the effort required to labor up the steep slope in the morning sun. I thought for a moment of breaking into that reverie, but then realized I could not communicate with her at all without Yoshi. And so I just stood to the side as she inched her way slowly and silently by. No special feeling accompanied that moment, only a sense of loneliness and sadness. I stood wondering why she was so determined on climbing Fuji and on doing so alone. In her traditional Japanese clothes and thongs, she seemed to be from a different age and place than the middle-aged, affluent and meticulously-equipped women who were part of many of the groups of hikers we encountered. I still think of that old woman, wishing that I had made more of an effort to understand her, her unquenchable spirit and the feelings she invoked in me.

Back at the Hachi-gome lodge we found Yoshi much revived. This very day the lodge was closing for the season and the owners were busy packing their equipment and installing the shutters that would protect it from the winter storms. After breakfast, we resumed our descent, having decided to take a different route over this last leg. Thus we hiked down to the Shichi-gome lodge on the Gotemba trail and there forked right to circle the Hoei-san crater, now on our right. For the next couple of miles, the steep trail is composed of deep and loose sand/gravel known as "sunabashiri". This allows for a quite novel and rapid mode of descent, a cross between skiing and running, in which one can safely take large sliding steps much as one would on a sand-dune. It also provides fascinating views of the Hoei-san crater itself and its interesting combination of vertical striations of solid rock



and slopes of sunabashiri. We kept to the right fork at each trail junction and circled down along the inside of the crater, eventually arriving at its base. From here it was a short hike along the cross-mountain trail back to Shin-go-gome and the car. Without much delay, we packed up and drove down the mountain to the Shin-Fuji station where I caught the shinkansen bound for Tokyo and Yoshi and Tanada began the long drive back to Osaka.

As I had imagined, it had not been a particularly difficult or scenic hike. Rather it had been an intriguing cultural experience, highlighted by my brief encounter with an old lady from a very different time and culture. In the days that followed I retained an eerie memory of that encounter and yearned to know what happened to her on the slopes of Fuji. I fervently hope she made it down safely.

### **Sep 1 Sun**

Travel Ueno to Hitachi City, Joban Line:

Super-Hitachi: Ueno 17.00-Mito 18.05

Off train at Mito Station. Only one exit.

Met by and dinner with Dr.Mitsuya, Hitachi

Mitsuya: Tel: 81-29-276-7334, FAX: 81-29-276-7450

Mitsuya: email: GHA10354@niftyserve.or.jp

Stay Hotel Sun-Garden, Hitachi City (81-294-22-5531).

### **Sep 2 Mon**

Visit Hitachi.

Dinner with Hitachi

Train to Ueno, Super-Hitachi, Omika 19.00- Ueno 20.23

Late: Travel to Ebara

Stay Shinagawa Prince Hotel

### **Sep 3 Tue**

Visit Ebara. Stay Ebara (near Haneda)

Ebara Haneda Works: Mr. Hiroyuki Kato, Dr. Saito

Ebara Kamakura Research: Dr.Yamamoto, Dr.Akira Goto, Dr.Sumio Saito

Saito: email: saito02@ebara.co.jp

Goto: Tel: 81-466-83-7606, FAX: 81-466-82-9371

Goto: email: goto05296@erc.ebara.co.jp

Stay Shinagawa Prince Hotel

### **Sep 4 Wed**

Travel to IHI (Yokohama).

13.00 - Nakanisi will meet me at Isogo Station (Negishi Line).

13.00 - Travel to IHI Yokohama Institute

13.20-13.30 Introduction to IHI

13.30-15.00 Tour of cavitation tunnel, etc.

15.00-17.00 Cavitation lecture and Rotordynamics Lecture

17.30-19.00 Reception at IHI Yokohama Guest House

Mr.Nakanishi (inducers), Dr.Okamura (ship))

Nakanishi: Tel: 81-45-759-2057, FAX: 81-45-759-2185

Nakanishi: email: nakanisi@ritj.ty.ihi.co.jp

Stay at IHI Yokohama Guest House

# Agenda

for **Prof. Brennen's** visit to  
IHI Research Institute(Yokohama)  
September 4,1996

Place : Meeting room(No. <sup>101</sup>~~202~~) in Yokohama Guest House

13:15~13:30 Introduction of IHI Dr. Okamura

13:40~15:00 Mini Tour to Several Laboratories

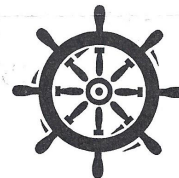
Hydraulic Laboratory	Mr. Kawasaki
Towing Tank	Dr. Shirose
Cavitation Tunnel	Dr. Shirose
Thermally Stratified Wind Tunnel	Mr. Hikami

15:10~17:00 Lectures and Discussion

“Cloud cavitation dynamics and acoustics”

“Fluid-induced rotordynamic effects in pumps”

17:30~19:00 Reception



## Sep 5 Thu

Visit Yokohama Nat.Univ.

(Prof.Kamemoto, Prof. Kurokawa)

Dinner with Kurokawa

Kurokawa: email: kuro@ibis.mach.me.ynu.ac.jp

Kurokawa arranging hotel in Yokohama

## Sep 6 Fri

Travel to Tokyo.

Visit Tokyo University. Cloud Cavitation Lecture.

16.00-17.30, NAOE Meeting room: Cloud Cavitation Lecture.

Beer party after lecture.

Prof.Kato and Prof.Matsumoto.

Matsumoto: Tel: 81-3-3812-2111 X6286, FAX: 81-3-3818-0835

Matsumoto: email: ymats@mech.t.u-tokyo.ac.jp

Stay in U.Tokyo guest house, Sanyo Kaikan.





**Sep 7 Sat**  
Fly Tokyo, Narita - LAX, UA 890, 4.00pm-9.55am.

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*Last updated 7/30/99.  
Christopher E. Brennen*

# TRAVELS NOW AND THEN

© Christopher Earls Brennen

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## SWITZERLAND 1996

**Thursday/Friday, 21/22 Nov. 1996**

11/21/96 Lufthansa 3520 from LAX to Frankfurt then  
11/22/96 Lufthansa 3696 from Frankfurt to Geneva

**Saturday, 23 Nov. 1996**



*Chamonix*







*Chamonix*



*Chamonix*





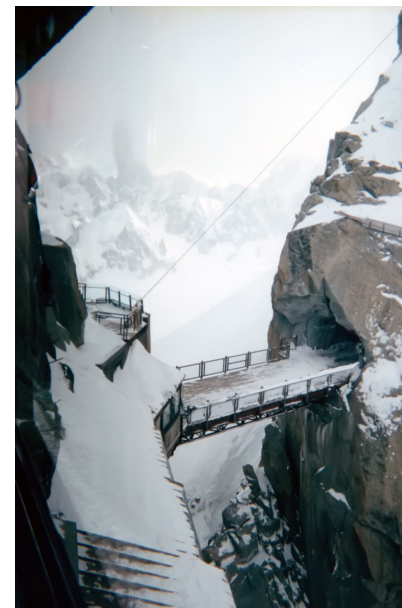
*Chamonix*



*Chamonix*







*Chamonix*

**Sunday, 24 Nov. 1996**



*Chateau de Chillon, Montreaux*



*Chateau de Chillon, Montreaux*



*Chateau de Chillon, Montreaux*

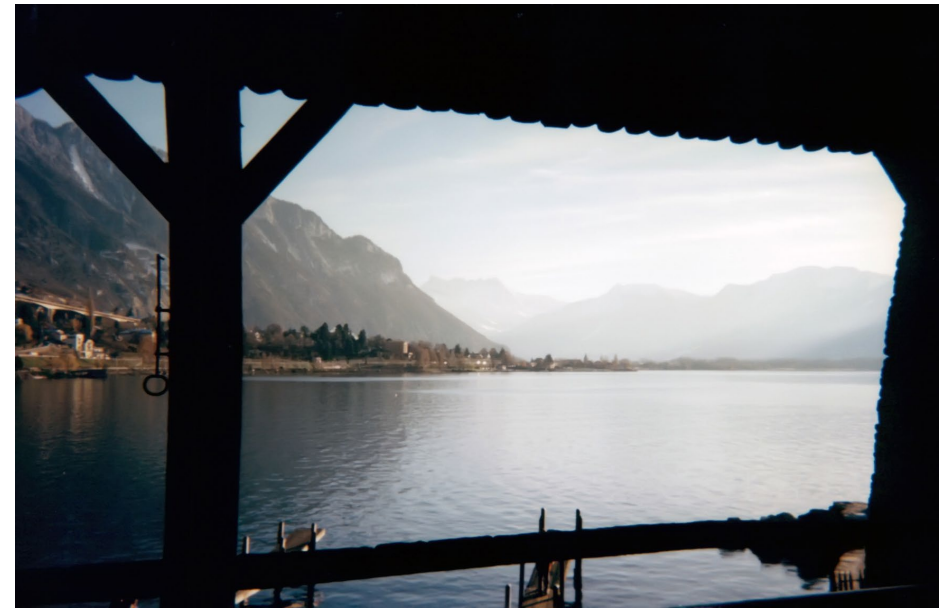




*Chateau de Chillon, Montreaux*



*Chateau de Chillon, Montreaux*



*Chateau de Chillon, Montreaux*

**Monday, 25 Nov. 1996**



*Rochers-de-Naye Railway*







*Rochers-de-Naye Railway*



*Rochers-de-Naye Railway*



*Rochers-de-Naye Railway*



*Rochers-de-Naye Railway*

**Tuesday, 26 Nov. 1996**

PhD Exam of M. Farhat

Drive with Jean-Pierre Franc from Lausanne to Grenoble







**Wednesday, 27 Nov. 1996** Visit Jean-Pierre Franc and J.M.Michel in Grenoble

**Thursday, 28 Nov. 1996**

TGV Train from Grenoble to Charles de Gaulle Airport, Paris

11/28/96 United Airlines 961 from Charles de Gaulle to San Francisco

11/28/96 United Airlines 2077 from SFO to LAX

[\*Back to table of contents\*](#)

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*Last updated 7/30/99.*

*Christopher E. Brennan*



# CALIFORNIA INSTITUTE OF TECHNOLOGY

Pasadena, California 91125

Thomas E. Everhart  
President

(818) 395-6366  
FAX (818) 449-9374

June 14, 1996

Professor Christopher Brennen  
360 Olive Tree Lane  
Sierra Madre, California 91024

Dear Professor <sup>Chris</sup>Brennen,

I am pleased to notify you that your salary for the academic year 1996-97 has been increased to \$140,500 effective October 1, 1996.

With this change in salary, the Institute's contributions to your benefit programs will be adjusted. These adjustments will be reflected in the statement of benefits that you will receive next year.

The key strength of the Institute is its extraordinary faculty. Your contributions help make Caltech what it is today, and this salary increase is a small expression of the Institute's appreciation for your many contributions.

Sincerely yours,



Thomas E. Everhart

*Thanks for your efforts to  
get and retain excellent  
students that add diversity!  
And congratulations on the ASCIT  
teaching award.*

## Teaching Questionnaire

Instructor: Dr. Chris BrennanCourse: ME19c Year/Term Spring '96You are a: ☐ Freshman ☒ Sophomore ☐ Junior ☐ Senior ☐ Graduate Student

You are being asked to provide your opinion regarding the effectiveness of your instructor in the attitudes or behaviors listed below. You may supplement this anonymous questionnaire with a formal signed letter to the Chairman of the Division of Engineering and Applied Science. Return this form in a sealed envelope to Marta Goodman, EAS Division Office, 104-44.

A= Excellent    B= Above Average    C= Average    D= Below Average    E= Far Below Average  
 NA= Not Applicable or No Opportunity to Observe

This instructor:

- |  |     |   |   |   |   |    |
|--|-----|---|---|---|---|----|
| 1. Has command of the subject.   | (A) | B | C | D | E | NA |
| 2. Was well prepared for class and gave presentations which were organized and clear.                                    | (A) | B | C | D | E | NA |
| 3. Was responsive to the class, e.g., welcomed questions and discussion as class size and other circumstances permitted. | (A) | B | C | D | E | NA |
| 4. Made course requirements and course grading criteria clear.   | (A) | B | C | D | E | NA |
| 5. Are the number of units of this course reasonable?  | (A) | B | C | D | E | NA |
| 6. Returned tests, papers and assignments in a reasonable time period.   | (A) | B | C | D | E | NA |
| 7. The probability I would recommend this instructor to another student is:  | (A) | B | C | D | E | NA |

Teaching Assistants:

- |   |   |   |   |   |   |    |
|---|---|---|---|---|---|----|
| 8. Were accessible at reasonable times. | A | B | C | D | E | NA |
| 9. Were helpful.                        | A | B | C | D | E | NA |

For laboratory courses:

- |   |   |   |   |   |   |    |
|---|---|---|---|---|---|----|
| 10. Experiments were informative and challenging. | A | B | C | D | E | NA |
| 11. Lab materials were available.                 | A | B | C | D | E | NA |
| 12. Lab equipment was in good repair.             | A | B | C | D | E | NA |

Comments:

*This was a great class.*

Comments:

*Really good class - all 3 terms  
 my favorite class @ TECH*



Comments:

Dr. Brennen is a fantastic teacher. The best I've had @ Caltech.

Comments:

Great Prof.

Comments:

Terific introductory course in fluid mechanics.

Taught in a manner that helped to make the subject interesting.

Comments:

Dr. Brennen is the BEST prof I have had at Caltech. Not only is he a great teacher, but he is very down to Earth and friendly. He ~~is~~ definitely has a lot to show other profs here.

Comments:

Both Teacher & TA seem very well prepared and organized and help relate the material very well to students.

Comments:

Prof. Brennen not only has command of this subject, but knows how to present the material clearly + effectively. He is amiable and truly enjoys teaching. I hope I can take another class from him in the future!!

The TA's were great. Robert was especially helpful + friendly.

Comments:

Never have I had, nor do I ever expect to have another professor who can even come close to the level of excellence which Dr. Brennen has reached.

## Teaching Questionnaire

Instructor:

Brennen

Course:

Me 196

Year/Term

1995-96 Winter

 You are a: ☐ Freshman ☐ Sophomore ☐ Junior ☒ Senior ☐ Graduate Student

You are being asked to provide your opinion regarding the effectiveness of your instructor in the attitudes or behaviors listed below. You may supplement this anonymous questionnaire with a formal signed letter to the Chairman of the Division of Engineering and Applied Science. Return this form in a sealed envelope to Marta Goodman, EAS Division Office, 104-44.

A= Excellent B= Above Average C= Average D= Below Average E= Far Below Average  
NA= Not Applicable or No Opportunity to Observe

This instructor:

- |  |   |   |   |   |   |    |
|--|---|---|---|---|---|----|
| 1. Has command of the subject.   | A | B | C | D | E | NA |
| 2. Was well prepared for class and gave presentations which were organized and clear.                                    | A | B | C | D | E | NA |
| 3. Was responsive to the class, e.g., welcomed questions and discussion as class size and other circumstances permitted. | A | B | C | D | E | NA |
| 4. Made course requirements and course grading criteria clear.   | A | B | C | D | E | NA |
| 5. Are the number of units of this course reasonable?  | A | B | C | D | E | NA |
| 6. Returned tests, papers and assignments in a reasonable time period.   | A | B | C | D | E | NA |
| 7. The probability I would recommend this instructor to another student is:  | A | B | C | D | E | NA |

Teaching Assistants:

- |   |   |   |   |   |   |    |
|---|---|---|---|---|---|----|
| 8. Were accessible at reasonable times. | A | B | C | D | E | NA |
| 9. Were helpful.                        | A | B | C | D | E | NA |

For laboratory courses:

- |   |   |   |   |   |   |    |
|---|---|---|---|---|---|----|
| 10. Experiments were informative and challenging. | A | B | C | D | E | NA |
| 11. Lab materials were available.                 | A | B | C | D | E | NA |
| 12. Lab equipment was in good repair.             | A | B | C | D | E | NA |

Comments:

Brennen is a great teacher!



Comments:

Brennen is the best teacher I have taken a class from in the ME dept. He makes the subject enjoyable and is very accessible to students. I hope he continues to teach classes for the dept. in the future.  
Robert Uy was a good TA also.

Comments:

Prof. Brennen is a wonderful lecturer/instructor. He is understanding & approachable

Comments:

Clear and concise lectures! always a pleasure to attend class!

Comments:

Very responsive & interesting professor  
Very well taught course

Comments:

I really like this class. It's quite challenging but enjoyed learning the material.

Comments:

- Prof. Brennen is probably the best lecturer I've had since coming to Caltech.
- Robert was a fantastic T.A., although Windsor left much to be desired.

Comments:

Prof. Brennen is far and away the best teacher I have had at Tech. He teaches instead of lecturing. He seems to care a lot about his students.

Dr. Brennen is the best instructor I've had at Tech. He tries to make everything clear and understandable and seems to really care about our understanding. He is always warm and receptive to students. The HW and exams are relevant and not far-removed from the lecture material. I feel like Dr. Brennen has taught all aspects of the material we need to know and connected it all logically. I cannot express how grateful I am to have had a prof like Dr. Brennen after having so many profs here that have left me confused and unconfident.



MS. D. MADDEN  
48 GLENBURN PARK  
MAGHERAFELT  
CO. LONDONDERRY  
N. IRELAND BT45 5BJ  
TEL. 0648 32423

5. May '96

Dear Christopher,  
I hope that - ages ago -  
you heard the news of  
the safe arrival of  
your books. I, myself, feel that the  
school will be very proud to have  
them. I did not hand them over at the  
time as everyone in the Rainey was  
going completely crazy whilst  
enduring the first big General  
Inspection for ages. (How glad I was

National Parks and Monuments Service  
Commissioners of Public Works in Ireland

at the timing of my retirement.)  
I left the books with Mr. McAlister  
who told me he appreciated the  
physics immensely but that the  
maths were beyond him!

However, on Friday last  
I delivered them to the  
Headmaster, so I hope


that you will hear from him soon.  
On Thursday night last, at  
our Old Pupils' meeting, the  
Speaker was Dr. Anthony  
Redmond - who I had not seen  
since he left school. He gave

a very good talk. Thank you again  
Best wishes Doro Thuy

THE GLEBE GALLERY, Co. Donegal  
(Derek Hill's Collection)

WEST END VILLAGE, TORY, BY JAMES DIXON  
OIL ON BOARD

GALEENRAI NA GLÉIBE, Co. Dhún na nGall  
(Baillíúchán Derek Hill's)  
An Baile Thiar, Toraighne  
peintéireacht ola ar chnir

FAX	
 <b>Advanced Fluids Engineering Research Center, POSTECH</b> San 31 Hyojadong Pohang 790-784 Korea Tel : 82-562-279-5904 Fax: 82-562-279-3199	TO : Secretary, IUTAM KYOTO, JAPAN
	ATT.: Prof. Christopher E. Brennen Calif. Inst. Tech. (Caltech), USA
	FAX NO.: 81-75-752-5296
	DATE : Aug. 24, 1996
	FROM : Prof. Choung Mook Lee
ELECTRONIC MAIL cmlee@vision.postech.ac.kr	DIRECT PHONE 82-562-279-5900
	PAGES INCL. THIS PAGE 3

## MESSAGE

Dear Mr./Ms Secretary of IUTAM Kyoto:

I will appreciate it very much if you would kindly deliver the letters attached herewith to the following participant to your Conference:

Professor Christopher E. Brennen  
 California Institute of Technology  
 Pasadena, California  
 U. S. A.

I presume he is one of the authors of a paper in fluid mechanics field. His specialty is in bubble dynamics and cavitating flow.

Sincerely yours,

Choung Mook Lee  
 Professor, POSTECH  
 Korea

P.S. Hi Chris, very sorry to bother you this far. If you get this message, please call me by a collect call to either my office or home(82-562-279-3161). I dug out your picture at Taechongbong.



Christopher E. Brennen, 96.8.22 4:58 PM, Re: Thanks again

To: brennen@accord.cco.caltech.edu (Christopher E. Brennen)  
From: cmlee@vision.postech.ac.kr (Choung Mook Lee)  
Subject: Re: Thanks again

Dear Chris,

I received the manuscript of your future book of Multiphase flow. It will be of great value to me to learn more about the multiphase flow.

Most of all, I was so thrilled in reading your Chapter 8 article of "Sorak Mountain." I am very very impressed about the skill of your writing and the keen observation of the things you have encountered in Korea. I really enjoyed reading your story. It seemed to me a best written travel story that everybody would enjoy reading it. So, I called up an editor of The Korea Times, an English daily newspaper in Korea, and asked him if he could print your article in his news paper.

He asked me to send it via Fax. I gave your address and e-mail address to which he could contact you. Chris, if I have done wrong, please forgive me. I was so carried away after reading your story, I could not wait to ask your opinion. I do not know how The Korea Times will react to my recommendation. I am sure if they are interested in, they will contact you directly or me to obtain your approval for printing it. Let me know right away if I have to withdraw my recommendation to The Korea Times. I really wish the article would be printed to let more people to have the benefit of enjoyment in reading a very interesting journey story, particularly for Koreans. For that part, I wish The Korea Times will translate your story in Korean and publish it in its sister Korean daily newspaper, Hankuk Ilbo, one of the three most popular newspapers in Korea.

One small correction in your article is that the place called Kangnung was misspelled as Kangkung in several places.

If your article get printed in the Korean newspapers, your next trip to Korea will be another exciting experience for you.

As ever,

Choung

Choung Mook Lee, 96.8.23 2:28 AM, Re: The Korea Times

1

Date: Fri, 23 Aug 1996 11:28:32 +0900

Mime-Version: 1.0

To: brennen@accord.cco.caltech.edu (Christopher E. Brennen)

From: cmlee@vision.postech.ac.kr (Choung Mook Lee)

Subject: Re: The Korea Times

Cc: cmlee

001-82-562-279-3199

Dear Chris,

I just received a fax message from the chief editor of The Korea Times. I will translate his message in Korean in the following:

Dear Prof. Lee,

I read the article you have sent with great interest. I would like to print the article in my news paper; however, I would like to obtain an approval on the following points:

1) I would like to remove the year 1992 because it gives an impression of too old story.

2) The length of the article is too long to be printed in a news paper. I would like to shorten it to about 1200 to 1300 words by removing the remarks about the history leading to the Korean War,

If the author approves, I would like to print the article next week. I would like to have Dr. Brennen's picture. Please let me know via either phone or fax.

Now, what should I do? I will try to dig out the picture of you at the peak of Taechong Bong, but I am not sure if I shall be succesful or not.

Choung



10: PROFESSOR CHOUNG MOOK LEE

FAX NUMBER: 82-562-279-3199

FROM: C.E. BRENNEN

Dear Chang,

I hope you can read my handwriting.

I was indeed very honored by your reaction to my story of SORAK. And, of course, I would be most happy to have it published in the Korea Times or any other form which you judge to be appropriate. I would be most happy to have you act as my agent in Korea. Furthermore the editor should feel free to edit the story ~~by~~ in the way described in your letter. So please proceed.

My only concern is that I wish to include the story in my own book of similar stories and would like to either

- 1) retain copyright for this purpose or
- 2) retain permission to reproduce the story in my book in the future.

I will gladly acknowledge the publication in

Again, I am most touched and honored  
by your opinion of my simple story which is  
exactly my experience in Korea. It would be  
marvellous to think that maybe the woman in the  
red dress would someday read the story.

Thanks and very best wishes

Chris



# CALIFORNIA INSTITUTE OF TECHNOLOGY

PASADENA, CALIFORNIA 91125

OFFICE OF THE CHAIRMAN  
OF THE BOARD OF TRUSTEES

October 17, 1996

Dr. Christopher E. Brennen  
Professor of Mechanical Engineering  
California Institute of Technology  
Mail Code 104-44  
Pasadena, CA 91125

Dear Dr. Brennen:

On behalf of the Board of Trustees, I would like to congratulate you on receiving a 1996 ASCIT Teaching Award.

This is a prestigious honor and we are delighted that you were chosen to receive it. We commend your efforts!

Sincerely,



Gordon E. Moore

cc: T. E. Everhart  
S. E. Koonin  
J. H. Seinfeld

# CALIFORNIA INSTITUTE OF TECHNOLOGY

Pasadena, California 91125

Steven E. Koonin  
Vice President and Provost

(818) 395-6366

July 12, 1996

Professor Christopher E. Brennen  
360 Olive Tree Lane  
Sierra Madre, California 91024

Dear Professor ~~Brennen~~ *Chinn*:

It gives me great pleasure to notify you that at the meeting of the Executive Committee of the Board of Trustees on July 9, 1996, you were reappointed "Executive Officer for Mechanical Engineering." With this reappointment, your position as Executive Officer will continue through June 30, 1999. You will continue to receive a salary increment of \$5,000 per annum for the length of this administrative appointment.

This action was recommended by the Division of Engineering and Applied Science and approved by the President and me. If these terms are agreeable, please acknowledge acceptance of this reappointment by signing the enclosed copy of this letter and returning it as indicated.

I greatly appreciate your willingness to continue assuming this additional responsibility.

Sincerely,

  
Steven E. Koonin

Enclosure  
cc: J. H. Seinfeld