

# Doors open in the private sector

PARALLEL with the opening of the public sector there has been rapid growth in opportunities for foreign researchers in Japan's private companies. Between 1988 and 1991 the number of foreign researchers in the private sector more than tripled to 750 (see figure). Some large corporations now employ over a hundred foreign researchers each (see table, right). The recession has cut into recruitment. But recruitment can be expected to resume when Japan pulls out of recession in the next year or two.

Japanese companies anticipate a shortfall in the domestic supply of researchers towards the end of this century because of a rapidly declining student population and a tendency for students to turn their backs on careers in science. In a 1991 survey of companies by the Science and Technology Agency, nearly 50 per cent say they intend to increase their foreign researchers to over 1 per cent of their research workforce, well above current levels in even the most progressive companies, and about 6 per cent have targets over 10 per cent.

Leading the pack are electronics companies like Sony, NEC, Toshiba, and Hitachi, which have special schemes to attract foreign researchers (see table below). Sony has a particularly progressive policy and has employed a British researcher to help with its recruitment drive. Competition is keen, with only 4 out of 200 applicants succeeding in a recent recruitment campaign. Sony's long-term goal is to increase the number of foreign researchers to 10 per cent, over ten times the present level.

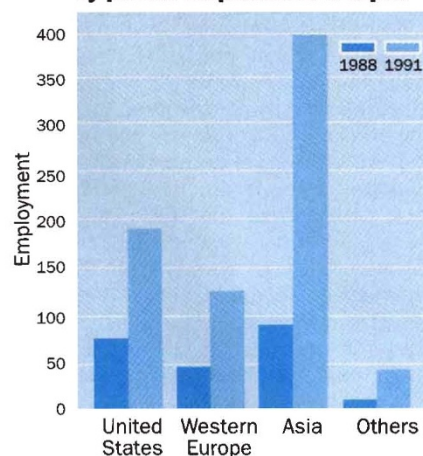
In the boom years of the late 1980s, many Japanese companies spent lavishly on new laboratories for basic research. These laboratories provide an attractive environment for researchers interested in long-term scientific research. An example is NEC's fundamental research

laboratory in Tsukuba science city which has 12 foreigners among the 300 research staff. The international teams of researchers there, for example, have produced a string of leading-edge research papers on carbon 60 and nanotubes (see *Nature* 362, 522; 1993).

Salaries for postdoctoral-level foreign researchers range from about ¥4 million (\$36,000) a year at the bottom of the scale to ¥9 million (\$81,000) a year for the very generous scheme run by Toshiba for British researchers. Most companies offer some sort of housing allowance on top of this.

Foreigners are usually employed on an

Foreign R&D personnel employed by private corporations in Japan



GROWING NUMBERS OF FOREIGN RESEARCHERS/ENGINEERS IN JAPANESE COMPANIES

Company	Foreign researchers/engineers						Researchers/engineers	Foreign employees	Employees
	1988	1989	1990	1991	1992	1993			
NEC	17	25	59	69	93	107	13,929	135	42,036
Toshiba	10	15	30	70	105	105	26,600	110	73,000
Sony	-	-	-	-	-	80	10,000	140	20,000
Mitsubishi Electric	-	-	-	-	54	80	23,200	68*	49,566
Fujitsu	-	-	-	-	-	~60 <sup>†</sup>	-	98	54,442
Hitachi	37	54	53	41	40	40 <sup>†</sup>	13,200	-	84,870
NTT	-	-	-	-	-	>30	8,600	-	242,700
Toyota	1	2	8	18	28	28 <sup>§</sup>	14,250	59	73,000
Matsushita Electric	-	-	-	-	-	-	-	50	47,643
Oki Electric	3	6	17	20	28	30	-	36	14,050
Nissan	-	-	11	17	21	21	7,700	31	53,000
Canon	-	-	9	8	14	10	6,000	17	20,500
Kobe Steel	5	7	7	8	7	7	-	37	20,635
Sanyo	0	0	1	4	7	7	-	29	30,725
Mazda	-	-	-	-	-	1	5,000	17	26,621
Honda	-	-	-	-	-	0 <sup>  </sup>	11,400	10	45,000

\*June 1992. <sup>†</sup>In addition, Fujitsu has about 30 visiting foreign researchers. <sup>‡</sup>Foreign researchers under Hitachi's HIVIPS visiting researcher programme. In addition to these, Hitachi currently has 5 permanent foreign researchers. Dashes indicate data not available throughout table.

<sup>§</sup>In addition, Toyota has about 100 foreign engineers temporarily assigned from overseas operations.

<sup>||</sup>Honda has about 100 foreign engineers temporarily assigned for 2-3 years from foreign affiliates.

annual contract basis. But some companies do offer the possibility of long-term employment on the same terms as Japanese colleagues. NEC, for example, has 8 such 'permanent' employees among 107 foreign researchers/

engineers. Sony encourages its foreign researchers to take up permanent employment after three years.

Japanese companies are recruiting researchers from many parts of the world. About half of NEC's foreign researchers come from advanced Western nations. The majority at Toshiba, on the other hand, come from Asia.

Japanese companies do not advertise positions widely, relying more on personal contacts. But many foreign researchers have succeeded in getting jobs simply by writing to companies.

While a few companies have well-developed policies for dealing with foreign researchers — Sony, for example, provides lessons in Japanese, and has in-house newsletters and videos in English to help new recruits settle in — others have a lot to learn. Those seeking employment in a Japanese company are advised to choose carefully. Companies with large numbers of foreign employees tend to have the most advanced policies on foreign recruitment.

D. S.

COMPANY SCHEMES FOR RESEARCH IN JAPAN

Company	Name of scheme	Eligibility	Contact
Hitachi	HIVIPS Visiting Researcher Programme	Professors or equivalent (level 1) PhD (level 2)	R & D Administration Office, Hitachi Central Research Laboratory, PO Box 2 Kokubunji, Tokyo
NEC	Visiting Researcher	Postdoctoral	Human Resources Development Division, International Personnel Relations, NEC Corp., 5-7-1, Shiba, Minato-ku, Tokyo
Sony	Global Researcher and Engineer Programme	University graduates	General Manager Human Resources, Sony Europa GmbH, Hugo-Eckener-Strasse 20, D-5000 Cologne, Germany
Toshiba	UK Fellowship Programme	Researchers in UK academic and government laboratories, ideally under 35	Toshiba Corporation (Europe Office), Audrey House, Ely Place, London EC1N 6SN, UK

Source: adapted from Gaijin Scientist (published by British Chamber of Commerce in Japan)