

Information Pasteboard

Weekly reports of meetings at NAL, snippets of R&D activity, conference announcements and other features of popular interest



[#IP 498 / 25 - 31 Mar 2002](#)

Dr R Balasubramaniam calls its a day



Handing over charge to Dr S Viswanath

R Balasubramaniam (or simply "RBS" to most of us) is retiring this weekend after completing over 35 years at NAL. "I began my career at NAL, and I am signing off from here. NAL has been so kind to me that even the thought of a change never occurred to me", RBS told us the other day.

Looking at RBS's marvellously illustrious career at NAL, we realise that he has been equally kind to NAL. We have seen every facet of his personality: during his last decade we saw RBS as a top quality R&D manager. Cool and capable, and with exceptional organisational capability, RBS led NAL's Structures Division from 1999 with distinction. His tenure saw a quantum leap in the Division's contribution to the SARAS programme and a massive influx of contract assignments for the Division.

Earlier, NAL was privileged to have RBS in his role as a serious and successful engineer in aerospace structures, structural dynamics, aeroelasticity and modal analysis. The significant contributions of RBS and his team include the mode indicator function method for solving helicopter structural dynamics problems, the development of MIFEATS (a mode indicator function based estimation and analysis system), the development of an image processing technique for mode shape determination and the development of a shake test facility for ALH.

RBS's career also includes a tremendously successful innings (in the mid-1990's) as India's S&T Counsellor in Germany when he initiated 136 Indo-German bilateral projects valued at DM 4.90 million and ushered in several innovative initiatives in Indo-German technical education. RBS's colleagues in the Indian Embassy in Germany still rave about his leadership and warmth. "Why didn't you bring Dr Balasubramaniam along?", they asked members of an NAL team visiting DLR last year, "we miss him so much!".

NAL too will miss RBS. But we are happy that he will still be around helping and advising NAL on its R&D programmes in different ways. We wish Dr Balasubramaniam a very successful second innings in life filled with good cheer, joyful music and excellent health.

Srinivas Bhogle

[NAL's citation to RBS](#)



Dr R M V G K Rao

DR R M V G K Rao, Sc G and Head, FRP Pilot Plant, has been elected a member of the Indian Institute of Chemical Engineers in February 2002.

[MRSI Medal oration by Dr R M V G K Rao](#)
R M V G K Rao's distinction

[Elected a member of the Indian Institute of Chemical Engineers](#)

[Member of the Board of Studies of the Department of Polymer Science & Technology of Sri Krishnadevaraya University](#)

[Dr R M V G K Rao's special gift](#)

[A visit to NIE](#)

[R M V G K Rao's distinction](#)

[Dr R M V G K Rao's distinction](#)

[Sukhdev Raj Sarna](#)

[New INAE Fellows](#)

[#IP 497 / 18 - 24 Mar 2002](#)

NAL hands over three HANSA aircraft



At a splendidly organised function at the Rustom B Damania Flight Hangar on 22 March 2002, NAL formally handed over three HANSA aircraft. Two of the aircraft were handed over to the Ministry of Civil Aviation (MCA). A third aircraft was handed over to the Department of Aerospace Engineering, IIT, Kanpur.

Mr K Roy Paul, Secretary, MCA was personally present to receive the two HANSA aircraft from Dr T S Prahlad, Director. "I haven't come here to receive these aircraft and hand over two cheques", Mr Roy Paul said, "I have come because I wanted to be with NAL and see for myself the wonderful work going on here".



Earlier, welcoming the distinguished gathering -- which also included Mr H S Khola, Director General of Civil Aviation, Prof N G R Iyengar, Chairman, Department of Aerospace Engineering, IIT, Kanpur, Mr E K Bharat Bhushan, Secretary, Government of Kerala and President, Kerala Aviation Training Centre (KATC) and Capt S N Reddy, Aviation Adviser, Government of Andhra Pradesh and Secretary, Andhra Pradesh Aviation Academy (APAA) and other senior DGCA officials -- Dr Prahlad said that it was a very special day for NAL to see three of its HANSA aircraft flying away. Dr Prahlad also paid a special tribute to DGCA and, in particular, Mr Khola. "DGCA pushed us hard, but we also received real encouragement from them".

The function, occasionally interrupted by the roar of fighter aircraft taking off from the HAL runway, featured a lot of "give and take". First NAL "handed over" the HANSA VT-HNU and VT-HNV aircraft to MCA and received two cheques, MCA, in turn, handed over the VT-HNU to KATC (MCA must still decide who will get VT-HNV -- at Friday's function both KATC and APAA made a spirited effort to persuade MCA to give them this aircraft). Finally, NAL "handed over" the HANSA VT-HNS to IIT, Kanpur and received yet another cheque.

In his brilliant summing up, Mr Khola had both praise and advice to NAL. The DGCA said that HANSA's success was a "proud moment" for India's aviation community. He also spoke with refreshing candour about the early years when NAL's HANSA was competing with DGCA's own trainer, SWATI -- and how HANSA eventually won out "because it was far superior". Mr Khola also admitted that he played tough with NAL when he insisted on night flying and lightning protection capability for the HANSA, but explained that this was essential if HANSA was to be used for training pilots seeking CPL's. He also asked NAL not to be complacent: "you must still worry about your price, your product support and your marketing -- each is a formidable challenge".

The highlight of the function was another exhibition of exuberant HANSA (VT-HNU) flying by Wg Cdr P Ashoka, accompanied by an excellent running commentary by A A Lakshman. Being a trainer aircraft, the HANSA is supposed to fly easily and safely (someone told Capt Reddy recently at Hyderabad that flying the HANSA VT-HNT "is like flying in heaven"), but when an ace pilot like Wg Cdr Ashoka sits in the HANSA cockpit, even watching the plane fly can be a heavenly experience.

Srinivas Bhogle

[More about HANSA](#)

[Slide show](#)

Anjana Jain, Ph.D.



Ms Anjana Jain, Materials Science Division, has been awarded the Ph.D. degree by Mangalore University for her thesis titled "X-ray and related studies on thermally treated polymeric materials" prepared under the guidance of Dr Kalyani Vijayan of Materials Science Division.

[#IP 496 / 11 - 17 Mar 2002](#)

Another HANSA takes off



HANSA VT-HNV, the third of a set of three aircraft being delivered by NAL to DGCA, had its maiden flight on 8 March 2002. The new aircraft, flown by Capt K K Sharma, Chief Flying Instructor, Carver Aviation Private Limited, Baramati, took off at 5.28 in the evening. After the flight, Capt Sharma said that the VT-HNV aircraft "felt good, was pleasant to fly and all controls were at ease". Following its successful flight, the HANSA VT-HNV received its certificate of airworthiness (C of A) on 14 March 2002.

Last month the HANSA VT-HNV's immediate predecessor, HANSA VT-HNU, also received its C of A from the DGCA on 24 January 2002. Readers of the Information Pasteboard will recall that HANSA VT-HNT, the first of the three aircraft ordered by DGCA, was positioned by the DGCA at the Andhra Pradesh Aviation Academy (APAA), Hyderabad on 12 April 2001 after it received its C of A on 12 March 2001. As on 12 March 2002 HANSA VT-HNT has already completed 80 hours of flying at Hyderabad.

C V Giri Raj, C-CADD.

[More about HANSA](#)

[Slide show](#)

Response to an advertisement



Last month NAL advertised for temporary trainee positions on its web site. For the first time we also decided to invite "electronic applications".

The response was overwhelming; we received almost 10,000 electronic submissions in four weeks!

As a part of our arrangement, I had asked applicants to send me e-mails if they wanted



Dr S
Viswanath,
Sc G and
Deputy
Head,
Structures

Division will take over as the Head of NAL's Structures Division after Dr R Balasubramiam retires on 31 March 2002.



Dr Anand
Kumar, Sc G,
C-MMACS,
has been
invited to join
the Regional

Editors' Board of the
CFD Journal.



Dr G
Prathap,
Scientist-in-
Charge, C-
MMACS, is
one of the

four new members of
The World Innovation
Foundation. The other
three Indian members
are Prof Roddam
Narasimha, Prof Tarun
Kant and Prof Narinder
K Gupta.,

more information or help.

I don't know if this was a smart idea or a stupid one. My mailbox was flooded with almost 100 mails every day. It was annoying to answer every mail, especially because the queries were quite similar in most cases.

But it was, at other level, an experience which saddened me deeply. There are so many youngsters out there, desperately seeking employment. I received mails which were anxious, earnest, imploring and, sometimes, poignantly honest. A kind or polite reply from me touched them so much that they sent me another mail to open! Sadly, a mere 100 of these applicants will make it to NAL. Where will the others go?

Srinivas Bhogle

HANSA aircraft: Chronology of Events

S No	Aircraft	First flight / No. of Hrs Flown	Test Pilot	Remarks
1	HANSA - 2 / 2 RE (VT-XIW)	23.11.93 / 128 hr	Wg Cdr P Ashoka	Now at HAL Aerospace Museum
2	HANSA 3 Prototype I (VT-XAL)	25.11.96 / 107 hr	Gp Capt Ashok Bhagwat	With Continental Engine IO-240 B
3	HANSA 3 Prototype II (VT - XBL)	11.05.98 / 259 hr	Sqn Ldr Baldev Singh	Certificate under JAR-VLA with RPTAX 914F3 Engine
4	HANSA 3 Pre Production (VT - HNS)	14.05.99 / 42 hr	Sqn Ldr Baldev Singh	To go to IIT, Kanpur
5	HANSA 3 Production001 (VT - HNT)	10.03.01 / 80 hr	Sqn Ldr Baldev Singh	Flying at Hyderabad
6	HANSA 3 Production002 (VT - HNU)	15.01.02 / 11 hr	Capt K K Sharma	Flying at Trivandrum
7	HANSA 3 Production003 (VT - HNV)	08.03.02 / 2 hr	Capt K K Sharma	Flying in Indore
8	HANSA(VT - HNW)	30.03.03 / 1 hr	Capt C S Anil Prakash	Likely to fly at Trivandrum

[#IP 495 / 4 - 10 Mar 2002](#)

"NAL's Loco-Photo Man"



Mr B Satya Bhagawan, a science graduate who metamorphosed into a good programmer, began his NAL career with the Mathematical Sciences Group. Starting 1986, he spent a decade with the Flight Mechanics Group where he contributed to the simulation activity and also worked on neural networks. Before moving over to Structures division he did a nice job of decoding an aircraft data from an encrypted form.

I knew Satya Bhagawan since 1974 when we both became disciples of the same sitar maestro, Mr N Rama Rao -- himself a disciple of Pandit Ravi Shankar. This connection grew into a friendship and our bond became stronger through the medium of photography about which we were both crazy. Initially Bhagawan resented automatic cameras, and treated his Pentax K-1000 as the world's most sacred object, but he soon successfully mastered automatic cameras; especially after he bought himself a Canon EOS system. As was his wont, Bhagawan systematically went through the manuals of the camera and understood all its intricacies. He went on to

"Engine Bhagawan"



Mr B Sathya Bhagawan, who passed away on 1 March 2002, was a born artist; we still recall his imaginative sketch of faces on postcards using fingernails.

Bhagawan was fascinated by Hindustani music; he learnt how to play the sitar under the tutelage of Mr N Rama Rao, the famous sitar player. Hindi film music was another of his loves: his soulful rendering of the songs sung by Mohammed Rafi is vivid in our memory.

become one of the best informal consultants on the Canon camera system.

Bhagawan was a man of varied interests. His greatest passion was steam locomotives; he talked about them with profound passion and reverence. Bhagawan photographed a number of steam locos in the railway yards at Bangalore, Mysore, Hubli, Dharwad, Harihar and other places and would often lament about the difficulties he faced with the railway bureaucracy. A story (perhaps apocryphal) of his passion for locos is that immediately after his marriage he asked his bride to pose in front of a steam loco.

Many of us probably didn't know of Bhagawan consummate skill at carving. He could make nice loco models out of chalk pieces or computer cards. He was especially skillful at making silhouettes on computer cards using his fingernails.

During his last years Bhagawan's obsession was Adobe Photoshop, the photo editing software, which he mastered. His "loco passion" combined wonderfully with Photoshop as Bhagawan meticulously restored his old B&W prints by scanning the negatives and performing a cosmetic "surgery" in which he removed the clutter of people, electric poles etc. in these pictures and even blended a nice cloudy background to aesthetically enhance the beauty of the loco. Mr C Rajagopal, the great photographer, was very appreciative of Bhagawan's work.

His photography spectrum was wide. His subjects included locos, birds, airplanes (only a few months back, he taught me the art of improving a badly shot picture of an airplane in flight), children and portraits. He was persistent in his approach. While living in Padmanabhanagar, Bhagawan spent many months photographing the sunset from a nearby hillock; prints of these photos were often displayed at Bangalore's photo labs. Bhagawan was a regular companion of the renowned wild life photographer Mr Hanumantha Rao on his trips to Kokkare Bellur and Bandipur, and his collection included some truly wonderful pictures of birds; a couple of them adorn NAL's S R Valluri Auditorium. Bhagawan also made innumerable portraits of Vidyabhushana Swamji, these were often used for the Swamiji's audio cassette covers.

Bhagawan was a lovable person who got along well with everyone. We will really miss him.

MS Rajamurthy

[Sukhoi Flight Displays at Aero India 98](#) | [Flight Displays at Aero India 2001](#)
[B S Bhagawan passes away suddenly](#) | [MS Rajamurthy's columns](#)

Bhagawan will however be best remembered as a photographer par excellence. His collection included outstanding photographs of birds and aircraft in flight. Coal locomotives particularly enthralled Bhagawan, and he frequently approached senior railway officials for permission to get these old engines out of their sheds so that he could photograph them. The internationally acclaimed photographer Mr C Rajagopal, who used to be our colleague, often chided Bhagawan: "you are certainly a good photographer, but why do you choose to click these ugly rail engines?". Bhagawan however remained undeterred and continued with his magnificent obsession. We will miss this simple man with an artistic bent of mind.

S Nagaraj

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