

**NEW HORIZON COLLEGE OF  
ENGINEERING  
DEPARTMENT OF ELECTRONICS AND COMMUNICATION  
ENGINEERING**

**08/02/2019**

**GUEST LECTURE**

- This is to inform to IV semester students of ECE that the guest lecture is arranged on 9/02/19 at Falconary Seminar Hall between 2.50PM to 4.50PM.

**Topic to be delivered : "VLSI - Transistor to Transformation"**

**Name of the Speaker : Mr. Shriram S**

**Designation : Hardware Design Engineer**

**Company : Intel Technologies, Bangalore**

Respective subject teachers are hereby informed to be present at Falconary Seminar Hall during the lecture.

All the faculty members are invited to attend the same without affecting the regular classes.

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M. Dharmambal 8/2/19  
Guest Lecture Coordinator

Saif  
HOD-ECE

*From the desk of:*  
Prof & HOD - Department of Electronics and Communication Engineering

02-01-2019

To,  
The Principal,  
NHCE  
NHCE/ECE/LTR/001/2019

Dear Sir,

**Sub:** Request for Falconry Hall on 9<sup>th</sup> February 2019,  
from 2.00pm to 4.00pm -reg

With reference to the above subject, guest lecture is scheduled on 9<sup>th</sup> February 2019 from 2.00pm to 4.00pm. I am hereby requesting you to permit us to use Falconry Seminar Hall on the above mentioned date and time.

Thanking you

With Regards,



HOD-ECE

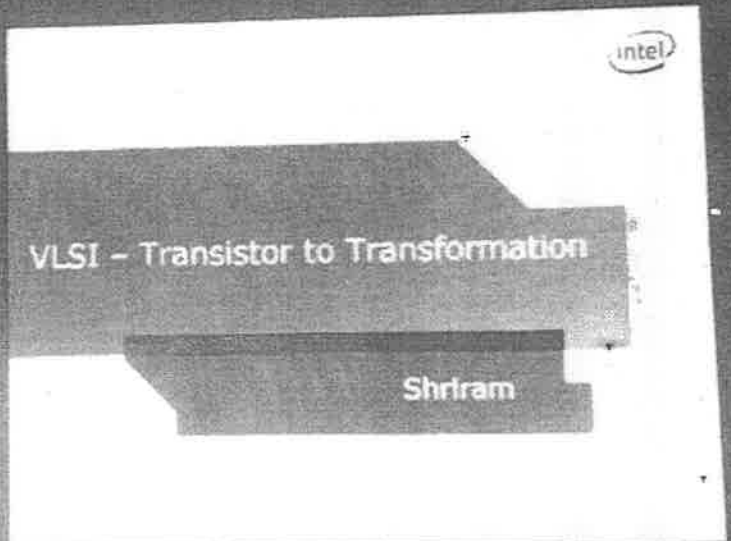
NEW HORIZON COLLEGE OF ENGINEERING

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# HORIZON COLLEGE



**W HORIZON**  
EDGE OF ENGINEERING





NEW HORIZON COLLEGE OF ENGINEERING  
DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING  
IV Sem "B" Sec

SL.No	USN	NAME	Stream	Batch	Dated
1	1NH17EC060	NISHMITHA C SHETTY	EXE	B1	Nishmitha
2	1NH17EC062	NITHIN R KALLIGUDI	EXE	B1	Nithin R
3	1NH17EC063	PALAGIRI JYOTHI KRISHNA	EXE	B1	Palagiri
4	1NH17EC064	PANUGANTI VIKAS	EXE	B1	Panuganti
5	1NH17EC065	PARTHASARATHI N	EXE	B1	Parthasarathi
6	1NH17EC066	PASSAVULA PHANINDRA	EXE	B1	Passavula
7	1NH17EC068	PRANAY CHATURVEDY	EXE	B1	Pranay
8	1NH17EC069	PRAVEEN KUMAR S	EXE	B1	Praveen
9	1NH17EC070	PREETHU C	EXE	B1	Preethu
10	1NH17EC071	PRINCE CHAURASIYA	EXE	B1	Prince
11	1NH17EC072	PUNEETH REDDY V	PROF	B1	Puneeth 29.1.19
12	1NH17EC073	R BARATH	EXE	B1	R Barath
13	1NH17EC074	R KISHAN KUMAR SAI	EXE	B1	R Kishan
14	1NH17EC075	R RAGHAVA	EXE	B1	R Raghava
15	1NH17EC076	RAHUL MONDAL	PROF-G	B1	Rahul
16	1NH17EC077	RAHUL V	PROF	B1	Rahul
17	1NH17EC078	RAVI KIRAN M B	EXE	B1	Ravi
18	1NH17EC079	RENUKA D N	EXE	B1	Renuka
19	1NH17EC080	RIYA RAKESH	EXE	B1	Riya
20	1NH17EC081	ROHITH P GOWDA	EXE	B1	Rohith
21	1NH17EC082	RUPSA DATTA	EXE	B1	Rupsa
22	1NH17EC083	S RISHITA	EXE	B1	S Rishita
23	1NH17EC084	SAIKAT SAMANTA	EXE	B1	Saikat
24	1NH17EC085	SAIMANTI SAHA	EXE	B2	Saimanti
25	1NH17EC086	SAMYUKTHA V	EXE	B2	Samyuktha
26	1NH17EC087	SATEESH R HEGDE	EXE	B2	Sateesh
27	1NH17EC088	SHAKTHI A	EXE	B2	Shakthi
28	1NH17EC089	SHALINI P N	EXE	B2	Shalini
29	1NH17EC090	SHARAN KUMAR K S	EXE	B2	Sharan
30	1NH17EC091	SHIVA S	EXE	B2	Shiva
31	1NH17EC092	SHOAIB AHMED	PROF	B2	Shoaib
32	1NH17EC093	SHRESTHA PATNAIK	EXE	B2	Shrestha
33	1NH17EC094	SHREYANKA S	EXE	B2	Shreyanka
34	1NH17EC095	SHWETA S	EXE	B2	Shweta
35	1NH17EC096	SOUVIK DAS	EXE	B2	Souvik
36	1NH17EC097	SOWMIYA A	EXE	B2	Sowmiya
37	1NH17EC098	SRINIDHI DAMODHAR	EXE	B2	Srinidhi
38	1NH17EC099	STANISLAUS LASRADO	PROF	B2	Stanislaus
39	1NH17EC100	SUHAIB AFNAN	PROF	B2	Suhaib
40	1NH17EC101	SUHAS H G	PROF	B2	Suhas
41	1NH17EC102	SUHAS S P	EXE	B2	Suhas
42	1NH17EC103	SUMITHRA V ARADHYA	EXE	B2	Sumithra

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43	1NH17EC104	SUNIL PATIL			
44	1NH17EC105	SUSHMA S	PROF	B2	Sushma
45	1NH17EC106	SYALE RAJ KUMAR	PROF	B2	Syale
46	1NH17EC107	TALLURI VENKATA VARUN SAI	EXE	B2	Talluri
47	1NH17EC108	TEJAS K	EXE	B2	Tejas
48	1NH17EC109	THEJAS U	EXE	B3	Thejas
49	1NH17EC110	THIKKAVARAPU SAI AVINASH R	EXE	B3	23.1.19 Thijal
50	1NH17EC111	THOMMANDRU VENKATA SAI M	EXE	B3	TSA
51	1NH17EC112	UPPU GIRIDHAR	EXE	B3	Uppu
52	1NH17EC113	V DHARANIDHAR	EXE	B3	Vidhan
53	1NH17EC114	V R SAI LAALITHYA	EXE	B3	V R Sai
54	1NH17EC115	V S MOUNIKA	EXE	B3	V S Mounika
55	1NH17EC116	VAKKALA MAHEEDHAR	EXE	B3	Vakkala
56	1NH17EC117	VIDHYA B	EXE	B3	Vidhya
57	1NH17EC118	VIDHYASHREE B M	EXE	B3	Vidhyashree
58	1NH17EC119	VINDHYA NARAYAN	EXE	B3	Vindhya
59	1NH17EC120	VISHWAJYOTHI B RESHMI	EXE	B3	Vishwa
60	1NH17EC122	Y C ABHAY KUMAR	EXE	B3	Abhay
61	1NH17EC123	YADHEESH	EXE	B3	Yadheesh
62	1NH17EC124	YASH MALVIYA	EXE	B3	Yash
63	1NH17EC125	YASSER FAIZ AHMED N	EXE	B3	Yasser
64	1NH17EC126	VAISHALI M S	EXE	B3	Vaishali
65	1NH17EC134	SALLA GUNA PRADEEP	PROF	B3	Salla
66	1NH17EC136	GADE NAVEEN REDDY	EXE	B3	Gade
67	1NH17EC138	SYKAM KARTHIK REDDY	PROF	B3	Sykam
68	1NH17EC139	NEELA LOKESH	EXE	B3	Neela
69	1NH18EC400	Aakash Singh N	EXE	B3	Aakash
70	1NH18EC401	Abishek N S	Prof	B3	Abishek
71	1NH18EC403	Akhilesh Venkappa Kshatri	Prof	B1	25.1.19 Akhilesh
72	1NH18EC404	Bhanu Priya N	Prof	B2	Bhanu
73	1NH18EC412	Sagar V	Prof	B3	Sagar
74	1NH18EC413	Sanjay P	Prof	B3	Sanjay
75	1NH18EC416	Shreekanta K S	Prof	B1	28.1.19 Shreekanta
76	1NH18EC420	Vignesh R	Prof	B1	Vignesh
77	1NH18EC423	Bindushri K	Prof	B3	Bindushri
78	1NH18EC426	Niveditha Y N	Prof	B2	Niveditha
79	1NH18EC427	Pavan Y	Prof	B2	Pavan
80	1NH18EC429	Sheshadhara Hegde	Prof	B1	Sheshadhara
81	1NH18EC430	Shrenik A Ugar	Prof	B3	Shrenik
82	1NH18EC431	Srilakshmi	Prof	B1	Srilakshmi

Note: Highlighted students should be informed to pay the Account dues.  
Students should not be given attendance till they clear the dues.

**NEW HORIZON COLLEGE OF ENGINEERING**  
**DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING**  
 IV Sem "C" Sec

SL.No	USN	NAME	Stream	Batch	Re-Registered	Dated
1	1NH16EC021	D Gowtham				
2	1NH16EC065	NILOTHPAL	EXE	C3		
3	1NH16EC140	Karthik K	EXE	C3		
4	1NH16EC701	A NAVYA SHREE	PROF	C3		
5	1NH17EC700	AATHIRA VIJAYAN	EXE	C3		
6	1NH17EC701	AJAY S	EXE	C1		
7	1NH17EC702	AKSHAJA SHIMALNA O K	EXE	C1		
8	1NH17EC703	ARAVIND P M	EXE	C1		
9	1NH17EC704	ASHIKA P	PROF	C1		
10	1NH17EC705	BHARGAVI	EXE	C1		
11	1NH17EC706	CHANDU V J	EXE	C1		
12	1NH17EC707	DHANUSH S	PROF-G	C1		
13	1NH17EC708	DHINAKARAN S	EXE	C1		
14	1NH17EC709	DISHANTH M P	EXE	C1		
15	1NH17EC710	G DEEPIKA	PROF	C1		
16	1NH17EC711	GAGANASHREE P S	EXE	C1		
17	1NH17EC712	GRACE GLADYS A	EXE	C1		
18	1NH17EC713	HARSHITH NAIDU J	EXE	C1		
19	1NH17EC714	J BHAVANA	EXE	C1		
20	1NH17EC715	JAYADEEP G P	EXE	C1		
21	1NH17EC716	JILLELLA RUPASAGAR REDDY	EXE	C1		
22	1NH17EC717	K AISWARYA	EXE	C1		
23	1NH17EC718	KONDURU SIVARAMA RAJU	EXE	C1		
24	1NH17EC719	KOTEPALLI RAMCHARAN	EXE	C1		
25	1NH17EC720	LAVANYA S N	PROF	C1		
26	1NH17EC721	MANISHA M N	EXE	C2		
27	1NH17EC722	MANOHAR G	EXE	C2		
28	1NH17EC723	MANOJ M R	EXE	C2		
29	1NH17EC724	MUNAGALA BHARATH KUMAR	PROF	C2		
30	1NH17EC725	NAINI NARAMA	EXE	C2		
31	1NH17EC726	NAVEEN KUMAR M S	EXE	C2		
32	1NH17EC727	NEHA KRISHNA	EXE	C2		
33	1NH17EC728	NIDUJUUVVI CHAKRADHAR	EXE	C2		
34	1NH17EC729	NIKHIL DWIVEDI	EXE	C2		
35	1NH17EC730	P K KANAKA SHARANYA	EXE	C2		
36	1NH17EC731	PALVADHI VENKATA SAI PAVAN	EXE	C2		
37	1NH17EC732	PAVAN U	PROF-G	C2		
38	1NH17EC733	PRACHI VERMA	EXE	C2		
39	1NH17EC734	PRAJWAL P	PROF	C2		
			EXE	C2		

40	1NH17EC736	RAHUL BALAJI P S		EXE	C2		
41	1NH17EC737	RISHIKA POTEPELLI		EXE	C2		
42	1NH17EC738	RITWIK SHOME		PROF	C2		
43	1NH17EC739	S DENILA GRACELIN		EXE	C2		
44	1NH17EC740	S RAHUL YADAV		EXE	C2		
45	1NH17EC741	S SAI HARSHA		EXE	C2		
46	1NH17EC742	SAHIB ARORA		EXE	C3		
47	1NH17EC743	SANDHYA K		EXE	C3		
48	1NH17EC744	SHARATH T P		EXE	C3		
49	1NH17EC745	SHARON MOSES		PROF	C3		
50	1NH17EC746	SHASHANK REDDY J		PROF-G	C3		
51	1NH17EC747	SHASHANK S SALOTAGI		EXE	C3		
52	1NH17EC748	SHIVANG DUBEY		PROF	C3		
53	1NH17EC749	SIRISHA B S		EXE	C3		
54	1NH17EC750	SOMA YASWANTH REDDY		EXE	C3		
55	1NH17EC751	SREEKAR REDDY KALLAM		EXE	C3		
56	1NH17EC752	SUHAS S		EXE	C3		
57	1NH17EC753	SYED TOUQEER		EXE	C3		
58	1NH17EC754	THUMMALA SURYA DEVI		EXE	C3		
59	1NH17EC755	USTHEPALLI ABHIRAM		EXE	C3		
60	1NH17EC756	VARUN P		EXE	C3		
61	1NH17EC757	VELURI SRI HARSHAVARDHAN		PROF	C3		
62	1NH17EC758	Y SUCHARITHA		PROF	C3		
63	1NH17EC759	YERRABALLI GURU SAI KUMAR		EXE	C3		
64	1NH18EC402	Aiyappa K K		EXE	C3		
65	1NH18EC406	Harshitha M		Prof	C3		
66	1NH18EC411	Roja Parameshwar Ullikashi		Prof	C3		25.1.19
67	1NH18EC415	Sathyaprasada G P		Prof	C3		21.1.19
68	1NH18EC419	Tejaswini T R		Prof	C3		

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**NEW HORIZON COLLEGE OF ENGINEERING**  
**DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING**  
**IV Sem "A" Sec**

SL.No	USN	NAME	Stream	Batch	Dated
1	1NH16EC038	KARROTU PRUDHVI	EXE	A1	
2	1NH17EC001	AARTHY P JAITH	EXE	A1	
3	1NH17EC002	ADESH V	PROF	A1	
4	1NH17EC003	ADITYA OMPRAKASH CHOUDHARY	EXE	A1	aditya
5	1NH17EC004	AKSHITHA R	EXE	A1	
6	1NH17EC005	ANAND T	EXE	A1	Anand
7	1NH17EC006	ANAND T	PROF	A1	Anand T
8	1NH17EC007	ANKIT KUMAR	EXE	A1	Anand
9	1NH17EC008	ARUN Y S	EXE	A1	Ankit
10	1NH17EC009	B S ABHISHEK	EXE	A1	Abhishek
11	1NH17EC010	B YAMINI	EXE	A1	Abhishek
12	1NH17EC011	BHARATH M	EXE	A1	Abhishek
13	1NH17EC012	BHARATH Y R	PROF	A1	Abhishek
14	1NH17EC013	BHASKAR K	EXE	A1	Abhishek
15	1NH17EC014	BOGGARAPU MOURYA YASWANTH	EXE	A2	Mourya
16	1NH17EC015	BOREDDY NAGA MAHESWAR Reddy	EXE	A2	Mourya
17	1NH17EC016	C O PRUTHVI	EXE	A2	Mourya
18	1NH17EC017	CHANDANA N	PROF-G	A2	Pruthvi
19	1NH17EC018	CHETHAN B R	PROF-G	A2	Pruthvi
20	1NH17EC019	DEEKSHITH N REDDY	PROF-G	A2	Pruthvi
21	1NH17EC020	DEEPAK S	EXE	A2	Pruthvi
22	1NH17EC021	DEVASHRUTHA S	PROF	A2	Pruthvi
23	1NH17EC022	DHANYASHREE V REDDY	EXE	A2	Pruthvi
24	1NH17EC023	DIVYA SAGAR REDDY	EXE	A2	Pruthvi
25	1NH17EC024	DUDDUKURI VAISHNAVI	EXE	A2	Pruthvi
26	1NH17EC025	G ASAD	EXE	A2	Pruthvi
27	1NH17EC026	G R VARSHA	EXE	A2	Pruthvi
28	1NH17EC027	GAGAN B K	EXE	A2	Pruthvi
29	1NH17EC028	GAUTAM SINHA	EXE	A2	Pruthvi
30	1NH17EC029	GIRIDHARAN P K	EXE	A2	Pruthvi
31	1NH17EC030	H K BHASKAR	EXE	A2	7.2.19
32	1NH17EC031	HARSHITHA G	EXE	A2	HK Bhaskar
33	1NH17EC032	IVATURI S S HARSHAVARDHAN	EXE	A2	Harshitha
34	1NH17EC033	J RUTH SHARON	EXE	A2	Harshitha
35	1NH17EC034	JERIN JOHNSON	EXE	A2	Jerin
36	1NH17EC035	JITENDER	EXE	A2	Jerin
37	1NH17EC036	K S SIRISH	PROF	A2	
38	1NH17EC037	K S SNEHA LATHA	EXE	A2	
39	1NH17EC038	KARAN SRINIVAS	EXE	A3	Sneha Latha
40	1NH17EC039	KAVYASHREE S	EXE	A3	23.1.19 Karan
41	1NH17EC040	KEVINE PRASANNA KUMAR	PROF-G	A3	Kavya
42	1NH17EC041	KUSHALA C	EXE	A3	Kushala

SL.No	USN	NAME	Stream	Batch	
43	1NH17EC042	M BHARAT			
44	1NH17EC043	M HEMANTH YADAV	EXE	A2	
45	1NH17EC044	MADALA HIMAJA	EXE	A3	M. Hemant
46	1NH17EC045	MADHUMITHA R	EXE	A3	Madha
47	1NH17EC046	MADHUPARNA BANERJEE	PROF	A3	(M)
48	1NH17EC047	MAMATHA B S	EXE	A3	23.1.19
49	1NH17EC048	MANIKANTA	PROF	A3	
50	1NH17EC049	MANISH B	PROF	A3	
51	1NH17EC050	MANISHA R	EXE	A3	Manisha
52	1NH17EC051	MILAN SHANKAR RAO M	EXE	A3	
53	1NH17EC052	MOHAMMED GHASSAN	PROF	A2	
54	1NH17EC053	MONIKA K REDDY	EXE	A3	Monika
55	1NH17EC054	NANDURI SRILASYA	EXE	A3	N. Srilasya
56	1NH17EC055	NAVAJITH R REDDY	EXE	A3	(Nava)
57	1NH17EC056	NAVEEN K M	EXE	A3	Naveen
58	1NH17EC057	NETTEM PARNITHA	EXE	A3	Parnitha
59	1NH17EC058	NIKITH BABU	EXE	A3	
60	1NH17EC059	NISHANTH C	PROF	A3	
61	1NH17EC127	SUMAN PAL	EXE	A1	
62	1NH17EC128	SUHAIL PASHA	EXE	A1	
63	1NH17EC129	BATHULA SRI SAI KRISHNA	EXE	A1	Sri Sai Krishna
64	1NH17EC130	ANISHA DEVI	EXE	A1	Anisha
65	1NH17EC131	ASHWIN S P	EXE	A3	
66	1NH17EC132	MURAKONDA AVINASH	EXE	A1	Avinash
67	1NH17EC133	THURPUNATI SURYA PRAKASH	EXE	A1	T. Surya
68	1NH17EC135	SAI KARTHIK P R	PROF	A1	Sai Kartik
69	1NH17EC137	GANGADHARA VARSHITHA	PROF	A1	Varshitha
70	1NH18EC405	Charan S	Prof	A3	Charan
71	1NH18EC407	Nagesh N Reddy	Prof	A1	Nagesh
72	1NH18EC408	Pragati Shrinivas Naik	Prof	A1	Pragati
73	1NH18EC409	Prashant Joshi	Prof	A3	Prashant
74	1NH18EC410	Ravi S	Prof	A3	Ravi S
75	1NH18EC414	Santosh B Gonal	Prof	A2	Santosh
76	1NH18EC417	Spoorthi S T	Prof	A1	Spoorthi
77	1NH18EC418	Swaroop M R	Prof	A1	Swaroop
78	1NH18EC421	Vinod K	Prof	A1	Vinod
79	1NH18EC422	Yashwanth N K	Prof	A2	1.2.19
80	1NH18EC424	Naveen N	Prof	A3	30.1.19
81	1NH18EC425	Nikhil Gopal Krishna Sirsikar	Prof	A3	Nikhil
82	1NH18EC428	Sandeep Reddy V	Prof	A2	21.1.19
83	1NH18EC432	Vishal Nayak	Prof	A1	Vishal

Note: Highlighted students should be informed to pay the Account dues.  
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**NEW HORIZON COLLEGE OF ENGINEERING**  
**DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING**  
**FEEDBACK FORM**

NAME OF THE EVENT/CLUB: VLSI - TRANSISTOR TO TRANSFORMATION

FEEDBACK ON (Mention the topic): VLSI - Transistor To Transformation DATE: 9/2/19  
Instruction: Please put a tick mark at the appropriate column.

Rating	Clarity	Visuals	Skills	Guidance	Overall
Excellent	✓		✓		✓
Good		✓		✓	
Average					
Satisfactory					

**Comments/Remarks/Suggestions:**

1. The lecture was very informative and interesting. We would like to have more of such audio-visual lectures in the future.
- 2.
- 3.

Name & USN No.(optional)

Signature (optional)

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**NEW HORIZON COLLEGE OF ENGINEERING  
DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING  
FEEDBACK FORM**

NAME OF THE EVENT/CLUB: *VLSI - transistor to transformation*

FEEDBACK ON (Mention the topic): *VLSI - transistor to transformation* DATE: *09/02/2019*  
Instruction: Please put a tick mark at the appropriate column.

Rating	Clarity	Visuals	Skills	Guidance	Overall
Excellent	✓		✓	✓	✓
Good		✓			
Average					
Satisfactory					

Comments/Remarks/Suggestions:

1. *It was really good lecture on VLSI, and I expect more*
2. *lectures on these kinds of topics.*
- 3.

Name & USN No.(optional)

Signature (optional)

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**NEW HORIZON COLLEGE OF ENGINEERING  
DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING  
FEEDBACK FORM**

**NAME OF THE EVENT/CLUB:** *Guest lecture*

**FEEDBACK ON (Mention the topic):** *VLSI - Transistor transformation* **DATE:** *9-02-2019*  
**Instruction:** Please put a tick mark at the appropriate column.

Rating	Clarity	Visuals	Skills	Guidance	Overall
Excellent				✓	
Good		✓			
Average	✓				
Satisfactory				✓	

**Comments/Remarks/Suggestions:**

- 1.
- 2.
- 3.

**Name & USN No.(optional)**

**Signature (optional)** *[Signature]*

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NEW HORIZON COLLEGE OF ENGINEERING  
DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING  
FEEDBACK FORM

NAME OF THE EVENT/CLUB: Guest Lecture  
VLSI - Transition to transformation

FEEDBACK ON (Mention the topic): ↗

DATE: 11/02/19

Instruction: Please put a tick mark at the appropriate column.

Rating	Clarity	Visuals	Skills	Guidance	Overall
Excellent					
Good		✓	✓	✓	✓
Average	✓				
Satisfactory					

Comments/Remarks/Suggestions:

- 1.
- 2.
- 3.

Name & USN No.(optional) SATHYAPRASAD, G.P. - IN 18EC415

Signature (optional) Sathy

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**NEW HORIZON COLLEGE OF ENGINEERING  
DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING  
FEEDBACK FORM**

**NAME OF THE EVENT/CLUB:** VLSI - Transistor to Transformation

**FEEDBACK ON (Mention the topic):**

**DATE:** 09-02-2019

**Instruction:** Please put a tick mark at the appropriate column.

Rating	Clarity	Visuals	Skills	Guidance	Overall
Excellent		✓			
Good	✓			✓	✓
Average			✓		
Satisfactory					

**Comments/Remarks/Suggestions:**

- 1.
- 2.
- 3.

**Name & USN No. (optional)**

**Signature (optional)**

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**NEW HORIZON COLLEGE OF ENGINEERING  
DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING  
FEEDBACK FORM**

**NAME OF THE EVENT/CLUB:** *VLSI + Transition to transformation*

**FEEDBACK ON (Mention the topic):**

**DATE:** *09:02:19*

**Instruction:** Please put a tick mark at the appropriate column.

Rating	Clarity	Visuals	Skills	Guidance	Overall
Excellent	✓				
Good		✓	✓	✓	✓
Average					
Satisfactory					

**Comments/Remarks/Suggestions:**

1. *Good*
- 2.
- 3.

**Name & USN No. (optional)**

**Signature (optional)**

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**NEW HORIZON COLLEGE OF ENGINEERING  
DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING  
FEEDBACK FORM**

**NAME OF THE EVENT/CLUB:** VLSI - transistor to transformation

**FEEDBACK ON (Mention the topic):**

**DATE:** 9/02/19

**Instruction:** Please put a tick mark at the appropriate column.

Rating	Clarity	Visuals	Skills	Guidance	Overall
Excellent					
Good	✓	✓		✓	✓
Average					
Satisfactory			✓	<del>✓</del>	✓

**Comments/Remarks/Suggestions:**

- 1.
- 2.
- 3.

**Name & USN No.(optional)**

**Signature (optional)**

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Excellent	✓	✓			
Good			✓	✓	✓
Average					
Satisfactory					

**Comments/Remarks/Suggestions:**

1. *Very informative, would have been more*
2. *interactive if it was a morning session*
- 3.

**Name & USN No.(optional)**

**Signature (optional)**

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## VLSI- Transistor to Transformation

Speaker : Mr. Sriram, Intel Corporation

Technology has evolved exponentially over the last century, from the invention of the 1st transistor in 1947 to having several billion transistors on a single chip today, all in accordance to Moore's Law.

Over the years, technology progressed from Small scale integration to medium scale integration to large scale integration and we currently are in the very large scale integration era. This term was coined over 40 years ago though we pushed the size a transistor even further down.

### History of Integration

Jack Kilby of Texas Instruments patented the principle of integration, created the first prototype ICs and commercialized them.

Kurt Lehovec of Sprague Electric Company invented a way to electrically isolate components on a semiconductor crystal.

Robert Noyce of Fairchild Semiconductor invented a way to connect the IC components (aluminium metallization) and proposed an improved version of insulation based on the planar technology by Jean Hoerni.

### FinFET Technology

286 - Standard 32nm MOSFETs were the predecessors of the FinFETs. The MOSFETs were now large and to keep up with Moore's Law, the FinFETs were developed. The FinFETs that are present in Apple's A12 Bionic chip uses the 7nm technology. The term 7nm used to once describe the width of the channel but in today's context, 7nm indicates the degree of precision achievable or the smallest change that can be made inside the transistor.

The challenge to keep up with Moore's Law is ever growing the technology today is so sophisticated that our transistors are close to the size of a single Si atom i.e., 0.23nm. Intel is currently working with the 7nm technology, along side research to shrink the size of the transistor even further down.

### VLSI design flow

Speaking of a billion 7nm transistors on a 3cm x 3cm chip, how is it actually done?

This process can be classified into 2 main blocks, Design and Synthesis.

- In Depth, there are 10 steps in fabricating an Integrated Chip

1. Design Entry- Designing the model in a HDL design environment using VHDL or Verilog.
2. Logic Synthesis- Converting the design to a Gate Level Diagram
3. System Partitioning- Dividing the existing blocks of the design into smaller blocks
4. Pre-layout Simulation- To simulate the circuit, check the layout and obtain a desired output.
5. Floor Planning- assigning different blocks a specific place on the chip

6. Placement- Placing these blocks on the chip
7. Routing- Connecting these blocks and isolating the metal layers
8. Circuit Extraction- Removing additional and other parasitic elements.
9. Post Layout simulation- Testing the design
10. Synthesis- Implementing the design on an actual Si Chip

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