### INTERNATIONAL Course Under GLOBAL INITIATIVE OF ACADEMIC NETWORKS (GIAN)







Government of India Ministry of Human Resource Development

# **Dosimetry and Advanced Radiotherapy Planning Techniques** January21<sup>st</sup> to January25<sup>th</sup>, 2019

# Foreign Faculty: Dr.R.Prabakar Course Coordinators: Prof.Dr.S.Ganesan and Dr.G.Bharanidharan

### Overview

Medical Physicists play an important role in the treatment of cancer patients undergoing radiotherapy. Medical Physicists work closely with radiation oncologist and are expected to have an in depth knowledge in imaging, external and internal radiation dosimetry, treatment planning, quality assurance and safe administration of radiation. Basic knowledge of radiation physics is essential to evaluate and intrepret the radiation effects on tumor and surrounding normal tissue and also to envisage any radiation induced adverse health effects. Radiation dosimetry is a vast subject and it requires several years of experience to master the subject. A thorough understanding of radiation physics and dosimetry with strong practical knowledge is a prerequisite for a practicing clinical Medical Physicist/MRSO. The lectures and tutorials presented in this training course will aim to provide the basic radiation physics and necessary skills required to practice radiation dosimetry. This training will also provide a guide to troubleshoot complex problems in radiation dosimetry.

## **Objectives**

The main objectives of the course are as follows:

- a) To provide basic training in Radiation Physics and dosimetry to Medical Physicist ,Radiation Oncologist and students.
- b) External and Internal radiation therapy
- c) Hands on experience in Film dosimetry
- d) Invivo dosimetry and its clinical significance
- e) Troubleshooting the complex problems in radiation dosimetry
- f) To provide hands on training on various methods of Treatment Planning
- g) Recent trends in electronic brachytherapy
- h) Internal Radiation Dosimetry
- i) PET-CT guided radiotherapy PET oncology tracers
- j) Nuclear Medicine Radiation Dosimentry Models

Modules	10 hours Lectures and 10 hours Tutorials/Laboratory: January 21 <sup>st</sup> to January 25 <sup>th</sup> 2019
You should attend if	<ul> <li>You are Medical Physicist, and researchers from government organizations including R&amp;D laboratories.</li> <li>You are a student (including MSc and PhD in Medical Physics, Radiation Physics and Radiotherapy) or faculty from reputed academic institutions and technical institutions.</li> </ul>
Fees	The participation fees for taking the course is as follows: Academic Institutions Students - Rs.500/- Academic Institutions Staffs - Rs.1000 /- Industry/ Research Organizations - Rs.2000/- Participants from abroad - 300\$USD The above fee includes all course materials. Accomodation and food based on Payment basis
Mode of Registration	<u>GIAN Registration:</u> The participants who wish to attend any GIAN course should register at <u>http://www.gian.iitkgp.ac.in/GREGN/index</u> and pay a one-time non-refundable payment of Rs.500 which is valid for lifetime . <u>Registration for the Course:</u> The participants are requested to pay participation fees in the form of demand draft in favour of TheDirector, CTDT, Anna University payable at Chennai.

#### Foreign Faculty



Dr.R.Prabakar is a Lead Physicist & Associate Professor, Department of PhysicalSciences, PeterMacCallum Cancer Centre (Monash Cancer Centre), Australia (PeterMac: since 16th March 2010). He is Leading a team of 6 Physicists and three PhD Students and also a Treatment Co-ordinator (Radiation Oncology). Planning He has qot professional certification from DABR (USA), ARECQA (Australia), RSO (I ndia), MARPS (Australia). He has been Awarded UICC ICRETT fellowship programme and He is reviewer of 27 reputed journals and aeditorial board member in 3 journals currently he is having two research grants. He has More than 20 years of experience in Medical Physics (Radiation Oncology) and more than 50 publications with with 31 first author (peer-reviewed full length articles). He has pronounced experience in IGRT, Adaptive RT, IMRT, SRS SRT, SBRT, VMAT, TSET, TBI, LDR/MDR/PDR/HDR, Brachytherapy/Electronic Brachytherapy and expertise in VB .net, C++, Matlab

#### **Host Faculties**



Prof.Dr.S.Ganesan is the Professor of Medical Physics in Department of Medical Physics, Anna University Chennai.He also served as the Visiting Scientist at W.M.Keck Centre for Cellular Imaging, Virginia, USA. He is the recipient of prestigious BOYSCAST award by DST during 1994He was the founder HOD of the Department of Medical Physics,CEG campus, Anna University.He has more than 100 international publication in reputed journals and he has guided 20 research students. His area of Research Interest is on Biophotonics,Radiation Dosimetry and other allied sciences.



Dr.G.Bharanidharan is the Assistant professor in Department of Medical Physics Anna University Chennai. He completed his PhD at Anna University.He has worked couple of years in All India Institute of Medical sciences and he is currently guidingsix researchstudent in the field of Radiation dosimetry and neutron monitoring

# **Contact Details**

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Global Initiative of Academics Networks(GIAN)
176020G03 : "Dosimetry and advanced Radiotherapy Planning Techniques"
21 <sup>st</sup> January to 25 <sup>th</sup> January, 2019
Anna University, Chennai
REGISTRATION FORM

Name (Block Letters)	:	
Age and Date of Birth	·	
Gender	: Male Female Transgender	
Educational qualification	:	
Designation :		
Experience :		
Institution	:	
Address	·	
Mobile	:	
E-mail	:	
GIAN Application ID	·	
(Application Id Generated during One time registration at GIAN portal of IIT Kharagpur)		
Course Fee	: Academic Institutions Students - Rs. 500/-	
	Academic Institutions Staffs - Rs. 1000/-	
	Industry/ Research Organizations - Rs. 2000/-	
	Participants from abroad: US \$300	
Payment should be mad	e through:	
Demand Draft , in favour	of "The Director CTDT, Anna University" payable at chennai.	
DD no:	, Date:	
Amount:	, Bank :	

Date: .....

Signature of Candidate

APPROVAL FROM INSTITUTION

Date: .....

Seal and Signature of the Principal/

Head of the Department/Division

Send through post to the course coordinator: Prof.Dr.S.Ganesan, Professor, Department of Medical Physics, Anna University, Chennai 600025, Mobile: 9840776274/981390079, Email: <u>medphyGIAN@gmail.com</u> Please visit www.gian.iitkgp.ac.in and www.annauniv.edu/gian/ for more details .