

# RADAM07 Programme 19<sup>th</sup>-22<sup>nd</sup> June 2007

Registration begins at 8 am each morning in Front Hall.  
Conference Venue is the Houston Lecture Theatre unless otherwise indicated  
(CH) = College Hall, (BR) = Board Room, Video-Conference Room.

Tuesday 19th June <i>Early Researcher Tutorial Day</i>	Wednesday 20th June <i>RADAM'07 Day 1</i>	Thursday 21st June <i>RADAM'07 Day 2</i>	Friday 22nd June <i>RADAM'07 Day 3</i>
<b>09:00</b> WG3 Tutorial	<b>09:00</b> <u>WG3-A</u> Radiation in physiological environments	<b>09:00</b> <u>WG5-A</u> Track structures in cells	<b>08:30</b> <u>WG4-B</u> Theoretical developments for radiation damage
<b>10:00</b> WG5 Tutorial			
<b>11:00</b> <i>Tea/Coffee</i>	<b>10:30</b> <i>Tea/Coffee (CH)</i>	<b>10:30</b> <i>Tea/Coffee</i>	<b>10:00</b> <i>Tea/Coffee</i>
<b>11:30</b> WG2 Tutorial	<b>11:00</b> <u>WG1-A</u> Electron and biomolecular interactions	<b>11:00</b> <u>WG1-B</u> Electron and biomolecular interactions	<b>10:30</b> <u>WG5-B</u> Track structure in cells
<b>12:30</b> <i>Lunch</i>	<b>12:30</b> <i>Lunch (CH)</i>	<b>12:30</b> <i>Lunch</i>	
<b>14:00</b> WG1 Tutorial	<b>13:30</b> <u>WG2-A</u> Ions and biomolecular interactions	<b>13:30</b> <u>WG2-B</u> Ions and biomolecular interactions	<b>12:00</b> Conference Tour 1. Walking tour of Dublin City Centre
<b>15:00</b> <i>Tea/Coffee</i>	<b>15:00</b> <i>Tea/ Coffee (CH)</i>	<b>15:00</b> <i>Tea/Coffee</i>	2. Bus Tour to Brú na Bóinne Neolithic site and interpretive centre
<b>15:30</b> WG4 Tutorial	<b>15:30</b> <u>WG4-A</u> Theoretical developments for radiation damage	<b>15:30</b> <u>WG3-B</u> Radiation in physiological environments	(Packed lunch provided)
<b>16:30</b> Summary	<b>17:00</b> Break	<b>17:00</b> <i>Break</i>	
		<b>18:00</b> Management Committee Meeting (VR)	
	<b>20:00</b> Poster Session and Reception (CH+BR)	<b>20:00</b> Management Committee Dinner (BR)	<b>19:30</b> <i>Conference Dinner (CH + BR)</i>

## Tuesday 19<sup>th</sup> June

### 08:30-09:00 Registration

#### Early Researcher Tutorial Workshop

*Coordinators: Jimena Gorfinkiel, Open University, UK* Venue: Houston Lecture Theatre  
*Isabella Baccarelli, CASPUR, IT*

09:00-09:10 Introduction Jimena Gorfinkiel

#### Tutorial 1: Working Group 3 - Radiation in physiological environments

09:10-10:00 Radiation Damage in Biological Systems Aidan Meade  
*Dublin*

#### Tutorial 2: Working Group 5 - Track structure in cells

10:00-11:00 Damage structure along ion tracks in cell nuclei Andreas Hauptner  
*Munich*

11:00-11:30 *Tea/Coffee*

#### Tutorial 3: Working Group 2 - Ions and biomolecular interactions

11:30-12:00 Experiments 1: Ion sources and collisions with isolated biomolecules Sam Eden  
*Lyon*

12:00-12:30 Experiments 2: Ion irradiation of large biomolecules and clusters Adam Hunniford  
*Belfast*

12:30-14:00 *Lunch*

#### Tutorial 4: Working Group 1 - Electron and biomolecular interactions

14:30-15:00 Theory: Electron-driven molecular processes induced in biological systems by ionizing sources I. Baccarelli  
*Rome*

15:00-15:30 Experiments: Inelastic electron interactions with biomolecules: from gas phase to complex systems S. Denifl  
*Innsbruck*

15:00-15:30 *Tea/Coffee*

#### Tutorial 5: Working Group 4 - Theoretical developments for radiation damage

15:30-16:30 Quantum chemical and dynamical tools for solving photochemical problems Ines Corral Perez  
*Berlin*

16:30- Summary

## Wednesday 20<sup>th</sup> June

<b>08:30-09:00</b>	<b>Registration</b>	Venue: Front Hall
09:00-10:30	Session 1 <b>WG3-A: Radiation in physiological environments</b> <i>Chair: Nigel Mason, Open University, UK</i>	Venue: Houston Lecture Theatre
09:00-09:40	Mechanisms of Adaptive Radiation Responses in Mammals at Chernobyl	Ron Chesser <i>Texas Tech University, USA</i>
09:40-10:05	Risks & potential damage from Ultraviolet (UV) Radiation used for Phototherapy	Neil O'Hare <i>St James Hospital, Dublin, Ireland</i>
10:05-10:30	The use of X-ray and particle microbeam techniques for investigating DNA damage in cells	Melvyn Folkard <i>Grey Cancer Institute, UK</i>
10:30-11:00	<i>Tea/Coffee break</i>	
11:00-12:30	Session 2 <b>WG1-A: Electrons and biomolecular interactions</b> <i>Chair: Ron Chesser, Texas Tech University, USA</i>	Venue: Houston Lecture Theatre
11:00-11:30	Synchrotron radiation studies of biomolecules	Kevin Prince <i>Elletra, Italy</i>
11:30-12:00	Theoretical calculations of parameters characterising electron impact with biomolecules	Dr. Peter Papp <i>Comenius University, Slovakia</i>
12:00-12:30	Prethermal radiation events in aqueous environments: the tenuous borderline between direct and indirect molecular damages	Yann-A. Gauduel <i>CNRS, France</i>
12:30-13:30	<i>Lunch</i>	

## Wednesday 20<sup>th</sup> June continued

13:30-15:00	Session 3 <b>WG2-A: Ions and biomolecular interactions</b> <i>Chair: Paulo Limao-Vieira, New University of Lisbon, Portugal</i>	Venue: Houston Lecture Theatre
13:30-14:10	Hyperthermal Ions Damage to DNA Components	Michaels Huels <i>University of Sherbrooke, Canada</i>
14:10-14:35	Ion processing of astrophysical ices	Maria Elisabetta Palumbo <i>Catania Astrophysical Observatory, Italy</i>
14:35-15:00	Energetics of ion induced fragmentation of DNA building blocks	Fresia Alvarado <i>University of Groningen, Netherlands</i>
15:00-15:30	<i>Tea/Coffee break</i>	
15:30-17:00	Session 4 <b>WG4-A: Theoretical developments for radiation damage</b> <i>Chair: Herwig Paretzke, GSF-Institut für Strahlenschutz Neuherberg, Germany</i>	Venue: Houston Lecture Theatre
15:30-16:00	Recent applications of the QM/MM method in photochemistry and photobiology	Adalgisa Sinicropi <i>University of Siena, Italy</i>
16:00-16:25	Photochemistry and photophysics of DNA nucleobases	Lluís Blancafort <i>Institut de Química Computacional, Girona, Spain</i>
16:25-16:45	Theoretical studies of electron-molecule collisions	Jimena Gorfinkiel <i>The Open University, Milton Keynes, UK</i>
16:45-17:05	Renner-Teller/Jahn Teller intersections along the collinear axes of polyatomic molecules	Ágnes Vibók <i>Department of Theoretical Physics, Debrecen, Hungary</i>
17:05-20:00	<i>Break</i>	
20:00-22:00	Poster Session and Welcome Reception	Venue: College Hall and Board Room

## Thursday 21<sup>st</sup> June

<b>08:30-09:00</b>	<b>Registration</b>	Venue: Front Hall
09:00-10:30	Session 5 <b>WG5-A: Track structure in cells</b> <i>Chair: Fiona Lyng, FOCAS, DIT, Dublin, Ireland</i>	Venue: Houston Lecture Theatre
09:00-09:30	Effect of oxygen on DNA damage caused by ionizing radiation - theoretical modeling approach	Vaclav Stepan <i>Nuclear Physics Institute, Prague, Czech Republic</i>
09:30-10:00	Local changes of higher-order chromatin structure during DSB-repair	Martin Falk <i>Academy of Sciences of Czech Republic, Brno</i>
10:00-10:30	Photoionization at atmospheric pressure of oligodeoxyribonucleotides: strand breaks induced by low energy electrons and hydrogen atoms	Aicha Bagag <i>ICSN-CNRS, France</i>
10:30-11:00	<i>Tea/Coffee</i>	
11:00-12:30	Session 6 <b>WG1-B: Electron and biomolecular interactions</b> <i>Chair: Kevin McGuigan, RCSI, Dublin, Ireland</i>	Venue: Houston Lecture Theatre
11:00-11:30	VUV irradiation of DNA	Gosia Smialek <i>The Open University, Milton Keynes, UK</i>
11:30-12:00	Electron attachment to gas phase biomolecules in superfluid helium	Stephan Denifl <i>University of Innsbruck, Austria</i>
12:00-12:30	Electron interaction with DNA and deoxyribose analogues	Aleksandar Milosavljevic <i>Institute of Physics, Belgrade, Serbia</i>
12:30-13:30	<i>Lunch</i>	

## Thursday 21<sup>st</sup> June continued

13:30-15:00	Session 7 <b>WG2-B: Radiation in physiological environments</b> <i>Chair: Dimitra Markovitsi Laboratoire Francis Perrin, CEA, France</i>	Venue: Houston Lecture Theatre
13:30-13:40	RADAM '08 Conference, Debrecen, Hungary	Bela Sulik <i>ATOMKI, Debrecen, Hungary</i>
13:40-14:10	Orientation sensitivity of capture fragmentation channels: a study with small molecules of different degree of symmetry	Bela Sulik <i>ATOMKI, Debrecen, Hungary</i>
14:10-14:35	Low Energy Ion Induced Radiation damage to DNA and its components	Adam Hunniford <i>Queen's University Belfast, UK</i>
14:35-15:00	Electron capture induced dissociation of peptide cations	Kristian Støchkel <i>University of Aarhus, Denmark</i>
15:00-15:30	<i>Tea/Coffee break</i>	
15:30-17:00	Session 8 <b>WG3-B: Radiation in physiological environments</b> <i>Chair: Bob McCullough, Queen's University Belfast, UK</i>	Venue: Houston Lecture Theatre
15:30-16:00	Targeting DNA in therapies: using damages to design strategies on cell sensitisation	Claudia Lage <i>Universidade Federal do Rio de Janeiro, Brazil</i>
16:00-16:30	Polonium 210: The German Experience	Herwig Paretzke <i>GSF Neuherberg, Germany</i>
16:30-17:00	It may not take a shillelagh to end a controversy among radiation scientists	Brenda Laster <i>Ben Gurion University of the Negev, Israel</i>
17:00-20:00	<i>Break</i>	
18:00-20:00	Management Committee Meeting	Venue: Video Conference Room
20:00-22:00	Management Committee Dinner	Venue: Board Room

## Friday 22<sup>nd</sup> June

<b>08:30-09:00</b>	<b>Registration</b>	Venue: Front Hall
08:30-10:00	Session 9 <b>WG4-B: Theoretical developments for radiation damage.</b> <i>Chair: Thomas Schlatholter, University of Groningen, Netherlands</i>	Venue: Houston Lecture Theatre
08:30-09:00	Theoretical study of the fragmentation of small biomolecules by swift ions	Jack Sabin <i>University of Florida, Gainesville, USA</i>
09:00-09:30	UV interactions with DNA helices	Dimitra Markovitsi <i>Laboratoire Francis Perrin, CEA, France</i>
09:30-10:00	Photostability of DNA: ultra-fast deactivation of an excited Guanine-Cytosine base pair	Martial Boggio-Pasqua <i>Imperial College, London, UK</i>
10:00-10:30	<i>Tea/Coffee break</i>	
10:30-12:00	Session 10 <b>WG5-B: Track Structure in Cells</b> <i>Chair: Marie-Christine Bacchus, Université Claude Bernard Lyon 1, France</i>	Venue: Houston Lecture Theatre
10:30-11:00	Interphase chromosomes: structure and radiation damage	Sergey Andreev <i>Institute of Biochemical Physics, Moscow, Russia</i>
11:00-11:30	Models and simulations of radiation induced chromosome damage	Andrea Ottolenghi <i>University of Pavia, Italy</i>
11:30-12:00	Biophysical modelling of DSB repair processes	Werner Friedland <i>GSF Neuherberg, Germany</i>
12:00-	Conference Tour 1. Walking Tour of Dublin City Centre <i>(Packed Lunch Provided)</i> 2. Bus Tour to Brú na Bóinne Neolithic Site and Interpretive Centre <i>(Packed Lunch Provided)</i>	
19:30-22:00	Conference Dinner	Venue: College Hall and Board Room