FREE INDUSTRY SEMINAR
Integral Water Management & Wet end optimisation

Hosted by BioPRIA in conjunction with Appita

www.biopria.com

BioPRIA and Appita are delighted to invite you to attend a free seminar by visiting Professors Angeles Blanco and Carlos Negro from the ChemEng Department, University Complutense of Madrid.

The two part seminar will explore Integral Water Management and Wet End Optimisation. The seminar is recommended for anyone working the area of papermaking, such as mill chemical engineers, technical managers, shift managers, machine operators and technical specialists from chemical companies.

WHEN: **16 August 2018**

TIME: **10:00 am - 1:15 pm**

WHERE: **BioPRIA, Building 59, 15 Alliance Lane, Monash University, Clayton Campus (Morning tea will be provided)**

PARKING: **Ticket parking available at the multilevel carpark just off Research Way.**

CLICK HERE TO REGISTER VIA EVENTBRITE
REGISTRATIONS CLOSE 14 August 2018

For further information please contact the Appita Office: admin@appita.com

BioPRIA | Appita

MONASH University

PROGRAM

10: 00 AM WELCOME - Professor Gil Garnier, Director BioPRIA

10:15 AM INTEGRAL WATER MANAGEMENT

The paper sector is leading water reuse in terms of separation of loops, recycling of processed water and development of advanced strategies for internal and external water reclamation and re-use. However water closure has a limit when the accumulation of contaminants become exponential, therefore additional treatment concepts are necessary to further reduce water consumption without affecting the process or product quality.

This case study seminar will explore a modern paper mill producing newsprint from 100% recovered paper, and the approach towards integral sustainable water use. The seminar will show the drivers for the technological approach in two steps:

1. **Increasing water circuit closure (from 12.5 to 7 m^3/t of paper)**

2. **The use of alternative water sources to further reduce the fresh/potable water consumption**
   - Alternatives to treat and re-use the mill effluent. Limitations and new solutions.
   - To replace 100% of fresh water by municipal/industrial reclaimed water.

Results from the pilot plant viability studies will be presented for the different cases as well as their main limitation. As a result of the research an industrial plant for reclamation of municipal water has been built and 100% reclaimed water has been successfully used without any problem.

11:30 AM WET END OPTIMISATION

Chemical treatments can affect not only the efficiency of the process (including the rate of production and various costs), but also the uniformity of the paper product, its optical properties, and its strength. Therefore wet-end optimization is a challenge that has to be adapted to each particular case.

Wet end optimization is complicate due to the instabilities caused by raw material and process conditions which can have different effects on the runnability of the paper machine and the properties of the final paper. Thus, it is important not only to understand the wet-end chemistry but also the impact of trends in papermaking on wet end and its final consequences on the final product.

The seminar will address:

- How to improve the effectiveness of papermaking chemicals by controlling the aggregation mechanism.
- Balance between retention and drainage.
- Integration of water and retention system management.
- On-line wet end control
- Wet end audit-A case study

12:30 PM DISCUSSION

1:15 PM WRAP UP

BioPRIA | Appita

MONASH University

PRESENTERS

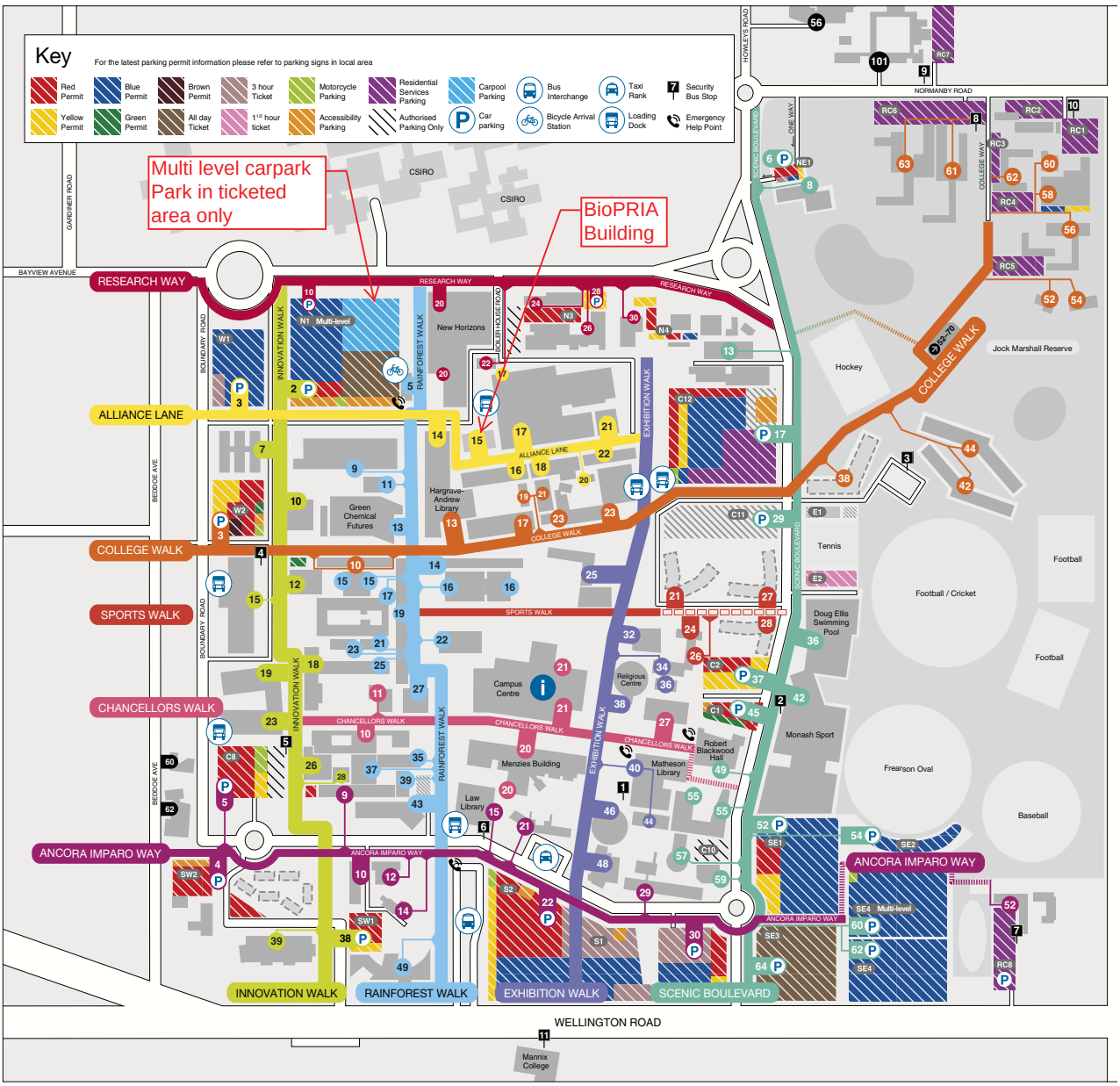
Carlos Negro is Professor of Chemical Engineering at the Complutense University of Madrid. His research interest is focussed mainly on sustainable water use in the industry, wet-end chemistry, paper science and technology, recycling and nanotechnology. Carlos group has made broad range of contributions to the field of sustainable water use for different industrial sector including: chemical industry, paper industry, petrochemical, packaging, stainless steel and food industries. He has extensive domestic and international collaborations participating in more than 100 research projects (regional, national, European and worldwide, public and industrial funded, fundamental and applied). He is member of the working group Water in the Industry of the European Technology Platform for Water.

Membership: AIChE Member Life, Fellow-RSC, ACS, ANQUE, IASPM, IWA.

Angeles Blanco is Professor of Chemical Engineering at the Complutense University of Madrid. Since 1990 she has been involved in pulp and paper research in the area of wet-end chemistry, sustainable water use, paper recycling, deposit control and in nanocellulose production and applications. She is the leader of the Cellulose and Paper Research Group of the Complutense University of Madrid since 2004 and she has been leader of the Advance UCM-Holmen Laboratory from 2005 to 2016. She has been the COST Spanish representative for the Forestry Products Domain for 15 years, she was member of the Research Committee of TAPPI for 6 years, advisor expert on science and technology of the EU Framework Programs, board member of the European Water Partnership (EWP) collaborating in the groups of Sustainable Water Management, Water and Energy and Climate Change, she has actively participated in the development of the Vision and Research Agenda of the European Forestry and Forestry Products Technology Platform, she has been Vice-president of the European Fibre and Paper Research Organisations (EFPRO) during 6 years, member of the Research Committee of CEPI during 10 years and Scientific Advisor of the Spanish Pulp and Paper Institute of Spain (IPE) during 4 years. She is editor of the journal Environmental Science and Pollution Research

Membership: APPITA, IWA, TAPPI, IASPM, AIChE and ANQUE.

Monash University Clayton campus



Building/dept. name & number	Address
Alexander Theatre (7)	48 Exhibition Walk
Australian Pulp and Paper Institute (59)	15 Alliance Lane
Bicycle Arrival Station – James Gormley (80A)	5 Rainforest Walk
Biochemistry Laboratories (16)	11 Chancellors Walk
Biological Sciences (18)	25 Rainforest Walk
Biological Sciences Lecture Theatres S7– S8 (21)	21 Rainforest Walk
Biology (17)	18 Innovation Walk
Boiler House (38)	22 Research Way
Campus Centre (10)	21 Chancellors Walk
Central Science Block (19)	19 Rainforest Walk
Chancellery Building A (3A)	27 Chancellors Walk
Chancellery Building B (3B)	36 Exhibition Walk
Chancellery Building C (3C)	34 Exhibition Walk
Chancellery Building D (3D)	26 Sports Walk
Chancellery Building E (3E)	24 Sports Walk
Chemistry (23)	17 Rainforest Walk
Mathematics & Earth, Atmosphere and Environment (28)	9 Rainforest Walk
Medicine A (13A)	37 Rainforest Walk
Medicine B (13B)	39 Rainforest Walk
Medicine C (13C)	10 Chancellors Walk
Medicine D (13D)	35 Rainforest Walk
Medicine E (13E)	9 Ancora Imparo Way
Medicine F (13F)	26 Innovation Walk
Medicine Teaching Services Unit (14)	28 Innovation Walk
Melbourne Centre for Nanofabrication (222)	151 Wellington Road
Menzies Building (11)	20 Chancellors Walk
Microbiology & Biological Sciences (53)	12 Innovation Walk
Monash Biomedical Imaging (220)	770 Blackburn Road
Monash Centre for Electron Microscopy (81)	10 Innovation Walk
Monash Children's Centre Co-op (162)	62 Beddoe Avenue
Monash Club (50)	32 Exhibition Walk
Monash College (73)	49 Rainforest Walk

Major lecture theatres	Address
Central One Lecture Theatre (63)	25 Exhibition Walk
Engineering Lecture Theatres E1 – E6 (32)	21 College Walk
Humanities Lecture Theatres H1 – H10 (11)	20 Chancellors Walk
Law Lecture Theatres L1 – 5, G20 (12)	15 Ancora Imparo Way
Medicine Lecture Theatre M1 (13)	35 Rainforest Walk
Medicine Lecture Theatres M2 – M3 (13)	37 Rainforest Walk
Rotunda Lecture Theatres R1 – R7 (8)	46 Exhibition Walk
Science Lecture Theatres (North), S13 – S15 (29)	11 Rainforest Walk
Science Lecture Theatres (West), S5-S6 (24)	15 Rainforest Walk
Science Lecture Theatres S1 – S4, S9 – S12, STI – 4, ST7 (25)	16 Rainforest Walk
Sir Alexander Stewart Theatre (72)	14 Alliance Lane
South One Lecture Theatre (64)	43 Rainforest Walk

Residences	Address
Briggs Hall (85B)	42 College Walk
Deakin Hall (48)	56 College Way

North-east One (NE1)
North-east Two (NE2)
North-east Three (NE3)
North-east Four (NE4)
North-east Five (NE5)
North-east Six (NE6)
North-east Seven (NE7)
North-east Eight (NE8)

South West Car Parks
enter via Wellington Road and
Central Eight (C8)
South-west One (SW1)
South-west Two (SW2)

South East Car Parks
enter via Wellington Road
Central One (C1)
Central Two (C2)

BioPRIA | Appita

MONASH University