15th International Congress on Marine Corrosion and Fouling

organised by Newcastle University on behalf of

Comité International Permanent pour la Recherche sur la Préservation des Matériaux en Milieu Marin (COIPM)

PROGRAMME and ABSTRACTS

The Sage Gateshead
25-29th July 2010

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Programme

SUNDAY, 25th JULY			
16.00-19.00	**Registration (Concourse, The Sage Gateshead)**		
MONDAY, 26th JULY			
08.00-08.45	**Registration (Concourse, The Sage Gateshead)**		
08.45-09.00	**Welcome**		
09.00-09.40	**26-H2-P:Plenary session (Hall Two) - Schultz**: Economic impact of biofouling on a naval ship		
09.40-10.00	**Refreshment break**		
	Session 1 (Hall Two)		**Session 2 (Barbour)**
	Hydrodynamics & ship efficiency (Swain)		***Biofouling in industrial cooling water systems (Bruijs)***
10.00-10.15	**26-H2-1-1:Haslbeck**: US Navy evaluation of a fouling release coating: biofouling control, physical performance, and impact on fuel economy	10.00-10.30	**26-B-1-1: Rajagopal** (keynote)**:** Biofouling and its control in industrial cooling water systems: an overview of the present and a peek into the future
10.15-10.30	**26-H2-1-2:Hasselaar**: Investigation into the development of an advanced ship performance monitoring and analysis system		
10.30-10.45	**26-H2-1-3:Yebra**: Fouling control products: value proposition and associated atmospheric pollution profile	10.30-10.45	**26-B-1-2: Wither**: Industrial cooling water systems: discharge controls in the European Union
10.45-11.00	**26-H2-1-4:Klijnstra**: Rapid screening of friction drag properties	10.45-11.00	**26-B-1-3: Venhius**: Root-cause analyses of corrosion in heat-exchangers: a case study
11.00-11.15	**26-H2-1-5: Kanar**: Innovative hydrodynamic approaches for drag properties evaluation of advanced antifouling coatings elaborated in nanotechnology fields, on basis of AMBIO project results	11.00-11.15	**26-B-1-4: Christiani**: Monitoring by an electrochemical integrated system of corrosion and antifouling treatments on aluminum brass condenser tubes
11.15-11.30	**26-H2-1-6: Atlar**: Boundary layer drag and surface roughness characteristics of nanostructured coatings	11.15-11.30	**26-B-1-5: Lamb**: Electrolytic anti-fouling systems for pumped water intakes in the oil + gas industry

	on an axysymmetrical slender body tested in a cavitation tunnel		
11.30-11.45	**26-H2-1-7: Gysel**: The environmental benefits of surface treated coatings (STCs)	11.30-11.45	**26-B-1-6: Glazer**: Characterization of the marine organisms on artificial substrates in a power plant in the southeastern Mediterranean
11.45-12.00	**26-H2-1-8: Senda**: Drag reduction for ships due to polymer release from painted surface by Toms effect	11.45-12.00	**26-B-1-7: Venugopalan**: Biofouling in Indian nuclear power plants – an overview of problems encountered and lessons learned
12.00-12.15	**26-H2-1-9: Sampson**: Cavitation and open water performance analysis of two types of antifouling propeller coatings	12.00-12.15	**26-B-1-8: Macdonald**: Industrial Cooling Seawater in the Middle East - a case study of operation optimisation and reduced environmental impact
12.15-12.30	**26-H2-1-10: Swain**: The mechanics and hydrodynamics of fouling release coatings	12.15-12.30	General discussion
12.30-14.00	**Lunch**		
	Session 3 (Hall Two)		**Session 4 (Barbour)**
	Regulatory and environmental (Hunter)		***Marine bioadhesion (Wilker)***
14.00-14.30	**26-H2-2-1: Hunter** (keynote): Antifouling regulations – regulatory approach to minimise their impact on the environment – how far have we come since TBT?	14.00-14.20	**26-B-2-1: Wahl**: Interfacial spectroscopy: in situ approaches to understand sticky contacts
14.30-14.50	**26-H2-2-2: Low**: Current regulatory issues for antifouling products under the EU Biocidal Products Directive	14.20-14.40	**26-B-2-2: Aldred**: Imaging temporary adhesion and surface exploration by barnacle cyprids
14.50-15.10	**26-H2-2-3: van Hattum**: MAM-PEC – a generic model for environmental exposure modelling for antifouling biocides. Introduction to vs 3	14.40-15.00	**26-B-2-3: Rittschof:** Barnacle glue curing and organization of marine communities
15.10-15.30	**26-H2-2-4: Prowse**: Use of environmental modelling to assess impact of changes in copper loading from	15.00-15.20	**26-B-2-4: Walker**: Insights into the composition, morphology, and formation of the calcareous shell of

	antifoulings in Californian marinas		the serpulid *Hydroides dianthus*
15.30-16.00	**Refreshment break**		
16.00-16.20	**26-H2-2-5: Blanck**: A proposed strategy for risk assessment of antifouling combinations in paint products	16.00-16.20	**26-B-2-5: Stewart**: The Sandcastle glue of *Phragmatopoma californica*
16.20-16.40	**26-H2-2-6: Shibata**: Prediction of environmental concentration for a photo-degradable anti-fouling agents	16.20-16.40	**26-B-2-6: Flammang**: The cement of sabellariid tube-dwelling polychaetes: A complex composite adhesive material
16.40-17.00	**26-H2-2-7: Long**: Advances in understanding of copper in the environment and the impact on its regulation	16.40-17.00	**26-B-2-7: Elwing**: Adsorption and cross-linking of marine bioadhesives
17.00-17.20	**26-H2-2-8: Lindblad**: Environmental risk assessment of Metatomodine – an effective metal-free antifouling biocide	17.00-17.20	**26-B-2-8: Cha**: Mussel bioadhesion: Study using recombinant mussel adhesive proteins and their coacervated forms
17.20-17.40	**26-H2-2-9: Taylor**: Release rate of copper pyrithione from coated fish nets – comparison of results from a modified test procedure modelled after ASTM D6903	17.20-17.40	**26-B-2-9: Wilker**: Chemical insights on how marine biological materials stick
18.00-20.00	**Welcome reception – Discovery Museum** (sponsored by International Paint Ltd.) Buses leave The Sage at 17.45-18.00		
	TUESDAY, 27th JULY		
09.00-09.40	**27-H2-P: Plenary session (Hall Two) – Williams**: Fouling Control Technology: Changes through Tyne		
09.40-10.00	**Refreshment break**		
	Session 5 (Hall Two)		**Session 6 (Barbour)**
	A) Industry perspective (Pereira) ***B) Aquaculture (Dürr)***		***Lab/field assessments of antifouling coating technologies (Stafslien)***
10.00-10.15	**27-H2-1-1: Tomasgaard**: New generation of copper (I) oxide for antifouling paints	10.00-10.30	**27-B-1-1: Rittschof** (keynote): A perspective from 2 decades of academic lab and field-testing of experimental and commercial coatings
10.15-10.30	**27-H2-1-2: Lindblad**: Medetomidine – from lab bench research towards market introduction		
10.30-10.45	**27-H2-1-3: Yebra**: The	10.30-10.45	**27-B-1-2: Callow**:

	winding road to commercial products - Hempel's experience		Integration of laboratory and field testing within the AMBIO project
10.45-11.00	**27-H2-1-4: Risberg**: Water uptake of commercial antifouling coatings with binders based on trialkylsilyl acrylates or metal acrylates/ carboxylates	10.45-11.00	**27-B-1-3: Coutinho**: Testing an analogue of antifouling from a marine sponge
11.00-11.15	**27-H2-1-5: Touzot**: A point at the operation for containership	11.00-11.15	**27-B-1-4: Anton**: ECOPAINT PACA Project: Antifouling activity of biocidal compounds through bioassays and field immersion test
11.15-11.30	**27-H2-2-1: Dürr**: Biofouling pressure at European aquaculture facilities over a 2-year period	11.15-11.30	**27-B-1-5: Webster**: Correlation between lab assays and field testing results for siloxane-polyurethane fouling-release coatings
11.30-11.45	**27-H2-2-2: Guenther**: The development of biofouling on commercial salmon cage nets in Mid-Norway	11.30-11.45	**27-B-1-6: Teo**: Rapid field testing of foul-release coatings using a novel waterjet testing apparatus
11.45-12.00	**27-H2-2-3: Powell**: Innovation in aquaculture cages using copper based alloys	11.45-12.00	**27-B-1-7: Stafslien**: Rapid biological laboratory assessments of antifouling marine coating performance: their utility and relationship to static ocean immersion testing
12.00-12.15	**27-H2-2-4: Woods**: Biofouling on Greenshell™ mussel (*Perna canaliculus*) farms: a preliminary assessment and potential implications for sustainable aquaculture practices	12.00-12.15	**27-B-1-8: Salta**: Bioassay screening and imaging for antifouling performance of novel natural products
12.15-12.30	**27-H2-2-5: Filtridge**: Foul play or facilitation? The impact of hydroid biofouling on mussel aquaculture in Port Phillip Bay, Australia	12.15-12.30	**27-B-1-9: Camps**: A reliable marine antifouling bioassay based on in vitro adhesion: comparison of the response of five pioneer bacteria
12.30-14.00	**Lunch**		
	Session 7 (Hall Two)		**Session 8 (Barbour)**
	New technologies to		***General aspects of fouling I***

	control fouling (Callow)		***(tbc)***
14.00-14.30	**27-H2-3-1: Brennan** (keynote): Biomimetic microtopographies – A green, antifouling technology	14.00-14.20	**27-B-2-1: Zargiel**: Variation in diatom community structure on antifouling and fouling release coatings from three static immersion test sites in Florida
14.30-14.45	**27-H2-3-2: Walker**: Water-stable diblock polystyrene-block-poly(2-vinyl pyridine) and diblock polystyrene-block-poly(methyl methacrylate) cylindrical patterned surfaces inhibit settlement of zoospores of the green alga *Ulva*	14.20-14.40	**27-B-2-2: Briand**: What is the influence of the nature of submerged artificial surfaces on the structure of microbial biofilm communities?
14.45-15.00	**27-H2-3-3: Galli**: Macromolecular engineering of nanostructured-surface films with amphiphilic copolymers for application in marine biofouling release coatings	14.40-15.00	**27-B-2-3: Satheesh**: Extracellular polymeric substance synthesis by bacteria during adhesion on surfaces: Influence of substratum variability and environmental factors
15.00-15.15	**27-H2-3-4: Ober**: Ambiguous, amphiphilic surfaces for fouling resistant coatings	15.00-15.20	**27-B-2-4: Dreanno**: A new marine biofilm forming model: *Pseudoalteromonas haerens*
15.15-15.30	**27-H2-3-5: Wooley**: Nanoscopically-complex, amphiphilic, non-toxic antifouling marine coatings: From hyperbranched fluoropolymer-poly(ethylene glycol)-derived networks to new generation materials		
15.30-16.00	**Refreshment break**		
16.00-16.15	**27-H2-3-6: Majumdar**: Polysiloxanes with tethered quaternary ammonium salts as novel antifouling/fouling-release coatings	16.00-16.20	**27-B-2-5: Goodes**: Determination of distribution of paint additives and assessment of their leaching rates using Laser Scanning Confocal Microscopy
16.15-16.30	**27-H2-3-7: Jiang**: Development of environmentally benign, durable and effective ultra low fouling marine coatings	16.20-16.40	**27-B-2-6: Dobretsov**: Inhibition of biofouling by quorum sensing inhibitors

16.30-16.45	**27-H2-3-8: Scardino**: Novel technologies to reduce biofouling on vessels when in port	16.40-17.00	**27-B-2-7: Palanisamy**: A comparative study on the antifouling activity of Indian and Caribbean Sea grasses extracts
16.45-17.00	**27-H2-3-9: Wang**: Preparation and topography observation of faveolate microstructure surface antifouling material	17.00-17.20	**27-B-2-8: da Gama**: Antifouling activity in *Sargassum vulgare*: within-thallus variation and polyphenolic content
17.00-17.15	**27-H2-3-10: Jonsson**: A new antifouling technology based on oxygen depleted surfaces	17.20-17.40	**27-B-2-9: Thabord**: *Sargassum polyceratium* chemical and physical impact on major coral reef invertebrate recruitment in Martinique (FWI)
17.15-17.30	**27-H2-3-11: Dahlström**: Anti-barnacle effect of medetomidine in soft and hard coatings		
18.30-10.00	**Poster session (Northern Rock Foundation Hall)**		
	P1: CUMBOR ET AL. : EVALUATION OF HEAVY METAL AND TBT CONTAMINATION ASSOCIATED WITH SHIPPING IN MUSSELS AND SEDIMENT ALONG THE WEST COAST OF THE UK		
	P2: ZHANG XIAODAN: AN ANTIFOULING-PAINTS PROJECT IN CHINA AND CHINA GREEN LABELING STANDARD FOR ANTIFOULING PAINTS		
	P3: SUGDEN ET AL.: COMPLEX INTERACTIONS BETWEEN ABIOTIC DISTURBANCE AND SURFACE REFUGE AND SHAPE DETERMINE THE SETTLEMENT OF MARINE PROPAGULES		
	P4: VON WALDEGGE: VARIABILITY AND SUCCESSION OF FOULING AND CORROSION ON COATINGS AND ADHESIVES AT DIFFERENT TEST SITES IN THE GERMAN NORTH SEA		
	P5: SOLOMON: FOULING CONTROL : MAKING THE ECO-EFFICIENT CHOICE		
	P6: PENG ET AL.: EFFECT OF INHIBITING WASHES ON COATING CHARACTERS BASED ON ELECTROCHEMICAL IMPEDANCE SPECTROSCOPY		
	P7: BIN ET AL.: STUDY ON THE ANTI-CORROSION PERFORMANCE OF ORGANIC COATINGS UNDER SIMULATED DEEP SEA ENVIRONMENT		
	P8: MESSANO ET AL.: THE INFLUENCE OF MARINE MICROFOULING COMMUNITY ON THE OPEN CIRCUIT POTENTIAL BEHAVIOR OF A DUPLEX STAINLESS STEEL UNDER FIELD AND LABORATORY CONDITIONS		
	P9: MCBETH ET AL.: IRON-OXIDIZING ZETAPROTEOBACTERIA ASSOCIATED WITH STEEL CORROSION IN NEARSHORE MARINE ENVIRONMENTS		
	P10: CHAW ET AL.: FEASIBILITY STUDY OF AN AUTOMATED ONLINE CLEANING SYSTEM FOR SEAWATER HEAT EXCHANGERS		
	P11: DÜRR ET AL.: SILICONE COATINGS AND CLEANING - ANTIFOULING STRATEGY FOR FISH NETS AND OYSTER TRAYS		
	P12: MARTIN: ANTIFOULING COATINGS FOR WAR SHIPS (ACWS)		
	P13: MARIMUTHU ET AL.: EFFICACY OF SOFT CORAL CRUDE EXTRACTS AGAINST THE FOULER – AN ANTIFOULING APPROACH		
	P14: MARANDA ET AL.: EFFICACY OF AN ISOTHIAZOLIN COMPOUND AS A		

	P37: ZHENG JIYONG ET AL: ANTI-DIATOM ACTIVITIES OF RESIN BASED COATINGS CONTAINING CRUDE EXTRACT OF GREEN ALGAL *ULVA PERTUSA*		
	P38: BLIHOGUE ET AL.: ARE ALKYLPYRIDINE-BASED COMPOUNDS SUITABLE BIOCIDES FOR ANTIFOULING PAINTS?		
	P39: ANTON ET AL.: ECOPAINT PACA PROJECT: NEW TECHNOLOGIES OF NON-TOXIC ANTIFOULING PAINTS		
	P40: ARRHENIUS: COMBINED EFFECTS OF ANTIFOULANTS – SYNERGISTIC, ADDITIVE OR ANTAGONISTIC EFFECTS?		
	P41: WENDT ET AL.: THE EFFICACY OF ANTIFOULING BIOCIDES: A SYSTEMATIC APPROACH		
	P42: KANIA & KANAR: MEASUREMENTS OF ROUGHNESS OF NEW ANTIFOULING COATINGS FOR SHIPBUILDING INDUSTRY ELABORATED WITHIN THE AMBIO PROJECT		
	P43: BENDAOUD ET AL.: PHOTOSYNTHETIC SYMBIONTS OF SPONGE : CHARACTERISATION AND IMPLICATION IN THE PREVENTION OF FOULING		
	P44: MARIMUTHU: BIOFOULING STUDIES DURING WRECK DIVING AT GRANDE ISLAND OF GOA, WESTCOAST OF INDIA		
	P45: GOHAD ET AL.: VISUALIZING ADRENERGIC RECEPTORS ON THE SENSORY ORGANS OF OYSTER AND BARNACLE SETTLEMENT STAGE LARVAE		
	P46: GALLUS ET AL.: PRESENCE OF NMDAR1 RECEPTOR IN THE CYPRID OF *BALANUS AMPHITRITE* (=*AMPHIBALANUS AMPHITRITE*) (CRUSTACEA, CIRRIPEDIA)		
	P47: THOMPSON ET AL.: NO STICKING! NITRIC OXIDE REDUCES THE ADHESION OF FOULING ALGAE		
	P48: HOLM & HASLBECK: EFFECT OF REPEATED CLEANINGS USING MULTIPLE TOOLS ON CONDITION OF A FOULING-RELEASE COATING		
	P49: QUINIOU ET AL.: TESTING METHODS TO ASSESS BOTH THE EFFICACY AND ECOTOXICITY OF ANTIFOULING COATINGS		
	P50: SHANKAR & PUNITHA: ANTIFOULING ACTIVITY OF THREE BACTERIAL STRAINS ASSOCIATED WITH MARINE SPONGE		
	P51: STAPATHY ET AL.: BIOFOULING AND ITS CONTROL IN THE COOLING WATER SYSTEM OF PROTOTYPE FAST BREEDER REACTOR - A TROPICAL MARINE ENVIRONMENT CASE STUDY		
	ADDITIONAL POSTERS IN WELCOME PACK		
WEDNESDAY, 28th JULY			
09.00-09.40	**28-H2-P: Plenary session (Hall Two) – Little**: The Study of Microbiologically Influenced Corrosion in Marine Environments – A Sea Change		
09.40-10.00	**Refreshment break**		
	Session 9 (Hall Two)		**Session 10 (Barbour)**
	New developments in fouling-release technology (Webster)		***Marine corrosion - materials (Little)***
10.00-10.30	**28-H2-1-1: Anderson** (keynote): Innovation in foul release: more about doing, less about dreaming	10.00-10.15	**28-B-1-1: Francis**: The performance of superduplex stainless steel in different types of seawater
		10.15-10.30	**28-B-1-2: Powell**: Long term studies of the performance

			of copper-nickel alloy sheathing for the splash zone corrosion protection of offshore structures
10.30-10.45	**28-H2-1-2: Lin**: Study on the antifouling ability improvement of silicone-based coating with poly (acrylamide-silicone)	10.30-10.45	**28-B-1-3: Xiaoyan**: Material database on corrosion control technology and protection of ocean engineering structures
10.45-11.00	**28-H2-1-3: Baum**: Foul release performance of flow point defined physical gels prepared from poly(dimethylsiloxane)	10.45-11.00	**28-B-1-4: Kanematsu**: Biofouling of chromium and nickel based materials in marine environment
11.00-11.15	**28-H2-1-4: Chisholm**: Novel, amphiphilic polysiloxane fouling-release coatings	11.00-11.15	**28-B-1-5: Kawakami**: Bacterial adhesion to copper alloyed antibacterial stainless steel surfaces
11.15-11.30	**28-H2-1-5: Tribou**: Investigation of grooming tools for ship hull coating maintenance	11.15-11.30	**28-B-1-6: Kanematsu**: Biofouling on EAF stainless steel oxidizing slag in marine environment
11.30-11.45	**28-H2-1-6: Murosaki**: Observation of barnacle settlement and growth process on soft and wet hydrogels	11.30-11.45	**28-B-1-7: Makama**: Cathodic delamination of cable connector assemblies: mechanisms, materials and testing protocols
11.45-12.00	**28-H2-1-7: Majumdar**: Novel antimicrobial, antifouling/fouling-release coatings containing quat-functional POSS compounds	11.45-12.00	**28-B-1-8: Bruin**: Using electrochemical impedance spectroscopy and microscopy for evaluation of ballast tank coating degradation by microorganisms
12.00-12.15	**28-H2-1-8: Webster**: Tough fouling-release coatings based on self-stratification	12.00-12.30	Q&A
12.15-12.30	**28-H2-1-9:Conlan:** The effect of modulus and thickness of polydimethylsiloxane coatings on the settlement and adhesion of *B. amphitrite*		
12.30-14.00	**Lunch**		
	Session 11 (Hall Two)		**Session 12 (Barbour)**
	Biocidal antifouling technology (Finnie)		***Microbiologically - influenced corrosion (Little)***
14.00-14.30	**28-H2-2-1: Ashmore**: Sea-Nine(TM) CR: a new, microencapsulated marine	14.00-14.30	**28-B-2-1: Johnston**: Biodeterioration of the RMS Titanic, microbiological

	antifouling product		assessment, 1996 to 2010
14.30-14.45	**28-H2-2-2: Nydén** (on behalf of Nordstierna): New approach to microcapsule synthesis – replacement of a hazardous chemical	14.30-14.45	**28-B-2-2: Rao**: Microbially induced localized corrosion of type 316L stainless steel in a recirculating seawater system
14.45-15.00	**28-H2-2-3: Nydén**: Release from painted surfaces: Free and encapsulated biocides	14.45-15.00	**28-B-2-3: Campbell**: Electrochemical and microbiological contributions to the corrosion of 70/30 CuNi Alloys in seawater
15.00-15.15	**28-H2-2-4: Backhaus**: Employing classical mixture toxicity concepts for the optimization of biocide combinations for antifouling paints	15.00-15.15	**28-B-2-4: Jeffrey**: The effect of sterilisation on the corroding of mild steel in coastal seawater
15.15-15.30	Q&A	15.15-15.30	Q&A
15.30-16.00	**Refreshment break**		
16.00-16.15	**28-H2-2-5: Jackson**: Development of antifouling paints for newbuildings - more than just good antifouling performance	16.00-16.15	**28-B-2-5: Duan**: Corrosion mechanism driven by marine electro-active biofilm
16.15-16.30	**28-H2-2-6: Bressy**: Aqueous-based acrylic miniemulsions: a family of seawater erodible polymers with tunable mechanical and erosion properties	16.15-16.30	**28-B-2-6: Miyano**: The study of biofilm formation and the electrochemical behavior of some metals in natural marine water
16.30-16.45	**28-H2-2-7: Hellio:** New functionalized oligoisoprenes based flexible antifouling coatings with antimicrobial properties	16.30-16.45	**28-B-2-7: Kumar**: Etching initiated corrosion of stainless steel 316L by the cement of the barnacle, *Amphibalanus reticulatus*
16.45-17.00	**28-H2-2-8: Pinori**: Post Settlement Inhibition (PSI) of barnacle growth, *Balanus improvisus*. A novel approach in marine anti-fouling control	16.45-17.00	**28-B-2-8: Lee:** Novel MIC mechanisms associated with storage of alternative fuels in marine environments
17.00-17.15	**28-H2-2-9: Ramotowski**: New, biofouling-resistant elastomers for acoustic applications	17.00-17.15	**28-B-2-9: Duan**: Application of atomic force microscopy in the study of sulfate-reducing bacteria biofilm
17.15-17.30	Q&A	17.15-17.30	Q&A
19.30-23.00	**Banquet (The Alnwick Garden)**		

	Buses leave The Sage at 18.30		
THURSDAY, 29th JULY			
09.00-09.40	**29-H2-P: Plenary session (Hall Two) – Hewitt:** Biofouling as a modern vector of invasions: risky behaviours and management opportunities		
09.40-10.00	**Refreshment break**		
	Session 13 (Hall Two)		**Session 14 (Barbour)**
	Fouling as a vector for invasive species (Ruiz)		***General aspects of fouling II (Swain)***
10.00-10.20	**29-H2-1-1: Teo**: Survey of sessile marine fouling organisms found on navigational buoys in Singapore's coastal waters	10.00-10.20	**29-B-1-1: Vance**: The effect of ocean acidification upon macrofouling in a temperate marina
10.20-10.40	**29-H2-1-2: Wendt**: Invasive bryozoans transported via hull fouling initiated a phase shift in a small California (USA) estuary	10.20-10.40	**29-B-1-2: Greco**: How do crabs keep their eyes clean? The synergistic antifouling approach of *Carcinus maenas*
10.40-11.00	**29-H2-1-3: Davidson**: Commercial ship biofouling as a transfer mechanism for species inoculations of the US Pacific Coast	10.40-11.00	**29-B-1-3: Pagett**: Understanding the settlement of *Balanus amphitrite* though the characterisation of glycans involved in gregariousness
11.00-11.20	**29-H2-1-4: Johnson**: Integrating antifouling strategies to minimize transport of marine invasive species by recreational boats	11.00-11.20	**29-B-1-4: Rosenhahn**: Influence of physicochemical surface properties on the settlement of spores of the green alga *Ulva* studied by three dimensional holographic tracking
11.20-11.40	**29-H2-1-5: Ralston**: The ghost of fouling communities past: evidence for carry-on effects on transplanted panels	11.20-11.40	**29-B-1-5: Birch**: Exploratory response of *A. amphitrite* cyprids on micro pillars
11.40-12.00	**29-H2-1-6: Thomason**: The relative risk of antifouling technologies for the transport of invasive species	11.40-12.00	**29-B-1-6: Magin**: A predictive model for the attachment of marine organisms to microtopographies
12.00-12.20	**29-H2-1-7: Campbell**: Slow moving barges: a risk assessment across domestic Australian borders	12.00-12.20	**29-B-1-7: Barlow**: Functional amyloid in the adhesive of the barnacle *Balanus amphitrite*
END OF CONGRESS (Scientific Programme) **See web site for post-Congress tours**			