

**August 22 (Monday) : Openings and Oral presentations (room 201)**

[C]-(1) Theory, Concept, General topics, [C]-(2) Software, Database, Hardware, Systems and [A]-(1) Marine (Habitat)

[Time keeper] Gouping ZHU (63), [Operation of PC & projector & Microphone distributor] Xiaoming YOUNG(64)

Subject	Moderator	Time	Title	Authors <u>The presenter is underlined</u> ( ): registration number	Abstract (page)	
Openings & Group Photos	James M. KAPETSKY (1)	11:00-11:45	Welcome speech	<b>Kiyoshi ITOH (5)</b> (Organizer) Fishery/Aquatic GIS Research Group, Japan		
				<b>President &amp; Professor Pan YINGJIE (57)</b> (Local Co-organizer), Shanghai Fisheries University		
				<b>Mr Guoqing FU (96)</b> Director of the Department of international Cooperation, Science & technology Commission of Shanghai Municipality		
			Background, Objectives, Structure and Remarks	<b>Tom NISHIDA (4)</b> (Convener) National Research Institute of Far Seas Fisheries, Japan		
			<b>Group Photos organize by the SFU (Room 201)</b>			
		<b>11:45-13:00</b>	<b>Complimentary lunch by the Organizer (SFU style Chinese buffet lunch at the dining room)</b>			
Oral [C]-(1) Theory, Concept, General topics	William L. FISHER (27)	13:00-13:20	GISFish:The FAO global gateway to GIS , remote sensing, and mapping for aquaculture and inland fisheries.	<b>James M. KAPETSKY (1)</b> Josè AGUILAR-MANJARREZ	<b>5</b>	
		13:20-13:40	Recent trends in GIS and spatial analyses in fisheries	<b>William L. FISHER (27)</b>	<b>6</b>	
		13:40-14:00	Delineating recommendation domains for freshwater aquaculture: deploying GIS for decision support	<b>Suan Pheng KAM (83)</b> Mark PREIN Madan DEY	<b>7</b>	
Oral [C]-(2) Software, Database, Hardware, Systems	Robert MIKOL (16)	14:00-14:20	Using a GPS as the Primary data collection Tool for low cost, high volume resource assessment	<b>Robert MIKOL (16)</b>	<b>8-9</b>	
		14:20-14:40	Electronic logbooks and data collection systems: Four years of lessons in a nutshell	<b>Robert MIKOL (16)</b>	<b>10</b>	
		<b>14:40-15:10 Tea break (Room 204)</b>				
		15:10-15:30	Visualise before you analyse – The unique challenges in working with complex temporal and spatial 4-dimensional data derived from modern fisheries sonar systems	<b>Tim PAULY (19)</b> Matthew WILSON	<b>11</b>	
		15:30-15:50	Expanding research efforts with the commercial fishing industries and integrating methods to share information over the internet	<b>Richard Taylor (78)</b> Norman VINE	<b>12-13</b>	
Oral [A]-(1) Marine (Habitats)	Paul EASTWOOD (6)	15:50-16:10	Spatial modelling of fish distributions in UK waters based on validation criteria	<b>Paul EASTWOOD (6)</b> David MAXWELL Craig MILLS Carla HOUGHTON Stuart ROGERS	<b>14-15</b>	
		16:10-16:30	Channel Habitat Atlas for marine Resource Management (CHARM Project):modelling fish habitat suitability using regression quantile	<b>Corinne S. MARTIN (10)</b> Paul D. EASTWOOD Sandrine. VAZ Bruno ERNANDE Andre CARPENTIER Frank COPPIN Stuart HARROP Geoff J. MEADEN	<b>16-17</b>	
		16:30-16:50	Biomass estimation of a Sargassum forest in Oura Cove in Izu Peninsula, central Honshū, Japan using aerial photography field survey and GIS	<b>Atsuko MIKAMI (60)</b> Teruhisa KOMATSU	<b>18</b>	
		16:50-17:10	Linking abalone fishery dependent data to fine scale habitat mapping	<b>Vanessa LUCIEER (69)</b> Craig MUNDY	<b>19</b>	

**17:30-19:30 ICE BREAKING COCKTAIL PARTY at the dining room hosted by the Orgnaizer.**

**August 23 (Tuesday) : Oral presentations (Room 201)**  
 [A]-(2)Maine (Fisheries), [B]-(1)&(2) Fresh water (Habitats & Fisheries) and  
 [A]-(4) Maine (Remote-sensing and acoustics)  
 and  
**Poster & Demosntration of software & systems by PC (Room 204)**

[Time keeper] Xiaohu ZHAO (67), [Operation of PC & projector & Microphone distributor] Bilin LIU(68)

Subjects	Moderator	Time	Title	Authors <i>The presenter is underlined</i> ( ): registration number	Abstract (page)
Oral [A]-(2) Maine (Fisheries)	Jianjun WANG (12)	9:00-9:20	Integration of GIS, remote sensing and statistical technologies to understand fish and cephalopod fishery dynamics	<u>Jianjun WANG (12)</u> Graham. John. PIERCE Bego. M.SANTOS M. SACAU J. PORTELA	23
		9:20-9:40	Investigating the spatial distribution of European anchovy using GAMs and GIS	Giannoulaki MARIANNA Machias ATHANASIOS Palialexis ANDREAS Somarakis STILIANOS Valavanis VASILIS <u>[ Isidora KATARA (23)]</u>	24-25
		9:40-10:00	Mapping of the fishing grounds of the lesser sandeel <i>Ammodytes marinus</i> , in the North Sea	<u>Peter SANDBECK (28)</u> Anne-Marie ROLEV Henrik JENSEN	26-27
		10:00-10:20	An application of spatial modeling to the classification of pelagic habitat and the subsequent estimation of temporal abundance of dolphinfish, <i>Coryphaena hippurus</i> , in the wider Caribbean	<u>Kristin KLEISNER (74)</u> David DIE Don OLSON	29
[A]-(6) Marine (assessment)		10:20-10:40	Preliminary stock assessment of the Atlantic sea cucumber <i>Isostichopus badionotus</i>	Mario MICELI <u>Philip Conrad SCOTT (72)</u> Lindsay G. ROSS	82-83
<b>10:40-11:20 Group Photo (Room 201) by the Organizer and Tea break (Room 204)</b>					
Oral [B]-(1) Fresh water (Habitats)	José Aguilar- MANJARREZ (2)	11:20-11:40	Multi-scale complementation of stream fish habitats: A GIS-based approach using movement capacities in heterogeneous riverscape	<u>Céline LE PICHON (7)</u> Guillaume GORGES Jacques BAUDRY	30
		11:40-12:00	Analyzing floodplain and aquatic nursery habitat of the Rio Grande silvery minnow at different hydrologic flows using GIS	<u>Joseph FLUDER (46)</u> Michael D. PORTER Tamara M. MASSONG	31
Oral [B]-(2) Fresh water (Fisheries)		12:00-12:20	Use of Geographical Information Systems (GIS) for Responsible aquatic resource management.	<u>José Aguilar-MANJARREZ (2)</u> James McDaid KAPETSKY Gertjan DeGRAAF Fabio CAROCCI J. Eric REYNOLDS	32
		12:20-12:40	Effects of catchment land use practices on eutrophication, blooming and sedimentation of the Kandy Lake-a case study using GIS	<u>U.S.P.K. LIYANAGE(85)</u> Swarna PIYASIRI <i>(probably cancelled)</i>	33
<b>12:40-14:00 Complimentary lunch by the Organizer (SFU style Chinese buffet lunch at the dining room)</b>					
Oral [A]-(4) Maine (Remote- sensing and acoustics)	Teruhisa KOMATSU (71)	14:00-14:20	Estimation of Sargassum biomass detached from the bottom by using multibeam sonar and GIS	<u>Teruhisa KOMATSU (71)</u> Atsuko MIKAMI Yasuaki MATSUOKA Koji SHIBATA Takahiko IKEMORI Noriyuki OKEI	34
		14:20-14:40	Improving real time data in oceanography through Meteosat Second Generation (MSG) satellite images	<u>Jane NDUNGU (88)</u>	35
		14:40-15:00	Research and development of ubiquitous information services for integrated fisheries activities in the offshore around Japan	<u>Sei-Ichi SAITOH (79)</u> Hidetada KIYOFUJI Daichi TACHIKAWA Mihoko ABE Kazuhiko TATEYAMA Motoki HIRAKI	36
Poster & PC demos Formal Session (Room 204)		15:00-17:00	<i>(Presenters must be at your site in Room 204)</i>		75-104

**August 24 (Wednesday) : Oral presentations (Room 201)**  
 [A]-(6)Maine (Geostatistics,Modellings & Forecastings) and  
 [A]-(3) Maine (Fisheries oceanography & Marine ecosystems)  
 and  
**Poster & Demosntration of software & systems by PC (Room 204)**

[Time keeper] Apiradee KULTHAI (84), [Operation of PC & projector & Microphone distributor] Sriporn PANGSORN (80)

Subjects	Moderator	Time	Title	Authors <i>The presenter is underlined</i> ( ): registration number	Abstract (page)	
Oral [A]-(6) Marine (geo-statistics, Modelling, resources analyses)	Norm GOOD (42)	9:00-9:20	Benthic habitat mapping with GIS: successes and challenges	<u>Michael PARKE (24)</u>	39	
		9:20-9:40	Developing an index of abundance for prawn and scallop stocks in the Queensland trawl fishery using maximum entropy methods	<u>Norm GOOD (42)</u>	40-41	
		9:40-10:00	Determination of harvest rates based on the estimated productivity of Geoduck ( <i>Panopea abrupta</i> ) metapopulation	<u>Zane ZHANG (47)</u> Claudia HAND	42	
		10:00-10:20	Analysis of the space-time variation of grouper ( <i>Epinephelus</i> ) and emperor ( <i>Lethrinus</i> ) in Omani waters, 1995-2004.	<u>L.H. AL-KHARUSI (43)</u> C.H. JARVIS A.C. MILLINGTON	43	
		10:20-10:40	Incorporating spatial autocorrelation into the General Linear Model with an application to the yellowfin tuna ( <i>Thunnus albacares</i> ) longline CPUE data	<u>Tom NISHIDA (4)</u> Ding-Geng CHEN	44	
		<b>10:40-11:10</b>	<b>Tea break (Room 204)</b>			
Oral [A]-(3) Marine (Fisheries Oceanography, and marine eco-system)	Mikio NAGANOBU (81)	11:10-11:30	Behavioral analysis of juvenile Southern bluefin tuna ( <i>Thunnus maccoyii</i> ) migrating in nearshore waters off southwest Australia	<u>Kentaro HONDA (52)</u> Kazushi MIYASHITA Ryo KAWABE Alistair HOBDA Ko FUJIOKA Yoshimi TAKAO	45	
		11:30-11:50	Oceanographic GIS: Mapping of marine productivity hotspots and mesoscale thermal fronts	<u>Isidora KATARA (23)</u> Andreas PALIALEXIS Alexandra KAVVADIA Vasilis VALAVANIS	46-47	
		11:50-12:10	Efficient use of GIS (Marine Explorer) for comprehensive ecological research activities in the Ross Sea, Antarctica	<u>Mikio NAGANOBU(81)</u> Yasuo YODA	48-49	
		12:10-12:30	Availability of fish to survey gears under variable environmental conditions	<u>Boonchai STENSHOLT (35)</u>	50	
			<b>12:30-14:00</b>	<b>Complimentary lunch by the Organizer (SFU style Chinese buffet lunch at the dining room)</b>		
	Graham J. PIERCE (8)	14:00-14:20	Interannual-decadal variability in the abundance of loliginid squid Loligo bleekeri in the southwestern Japan Sea during the last three decades: impact of bottom trawl fishing and oceanographic conditions	<u>Yongjun TIAN (66)</u>	51	
		14:20-14:40	Mapping and modelling spawning habitat for the squid Loligo forbesi	<u>Graham J. PIERCE (8)</u> G. STOWASSER C.D. MACLEOD T. VALINASSAB Bego. M. SANTOS Jianjun WANG	52	
		14:40-15:00	Predicting potential habitat for albacore tuna ( <i>Thunnus alalunga</i> ) using remote sensing and GIS in the northwestern North Pacific	<u>Mukti ZAINUDDIN (40)</u> Katsuya SAITOH Sei-Ichi SAITOH	53	
15:00-15:20		Estimation of locality in pelagic fishes distribution using data from sonar survey	<u>Kazutohi WATANABE (76)</u> Koki ABE Yoshimi TAKAO Tomoyuki ITOH Kouichi SAWADA	54		
Poster & PC demos Formal Session (Room 204)		15:20-17:00	<i>(Presenters must be at your site in Room 204)</i>		75-104	
		17:00-17:30	<i>(dismantle)</i>			

19:00- Sympisum dinner hosted by the President of Shanghai Fisheries Univerity

## August 25 (Thursday) : Oral presentations (Room 201)

[A]-(7) Maine (Mariculture)  
 [B]-(3) Blackish water(Ecology),  
 [B]-(6) Fresh water (Modelling)  
 [B]-(8) Fresh water (Biodiversity)  
 [A]-(5) Marine(Resource analyses & Managements)

*[Time keeper] Jiaqiao WANG (95) [Operation of PC & projector & Microphone distributor] Feng Bo (94)*

Subjects	Moderator To be assigned	Time	Title	Authors <i>The presenter is underlined</i> ( ): registration number	Abstract (page)
Oral [A]-(7) Marine (Mari- culture)	Philip Conrad SCOTT (72)	9:00-9:20	GIS and remote sensing for the development and management of open Ocean aquaculture: A reconnaissance	<u>James M. KAPETSKY (1)</u> José Aguilar-MANJARREZ	<b>57</b>
		9:20-9:40	Mariculture site selection for Boa Vista, Cabo Verde	Nuno RIBEIRO Mario MICELI <u>Philip Conrad SCOTT (72)</u> Lindsay G. ROSS	<b>58-59</b>
9:40-10:00		Mapping seagrass beds in Funakoshi Bay, Sanriku Coast, Japan, by high precision multi-spectral images of IKONOS and GIS technique	<u>Tatsuyuki SAGAWA (37)</u> Atstuko MIKAMI Teruhisa KOMATSU Naoko KOSAKA Akinori KOSAKO Sanae MIYAZAKI Masahiro TAKAHASHI	<b>60-61</b>	
10:00-10:20		Modeling water quality of Shafarood River for the aquatic life	A.K DARBAN <u>A. KHODADADI (87)</u> H. NAZARI	<b>62-63</b>	
10:20-10:40		Use of geographical information systems in arranging and monitoring freshwater fish biodiversity within water bodies of Samaspur Bird Sanctuary, India	<u>Uttam K. SARKAR (90)</u> Ajey K. PATHAK Dhurendra KAPOOR Samir K. PAUL <i>(probably cancelled)</i>	<b>64</b>	
		<b>10:40-11:10</b>	<b>Tea break (Room 204)</b>		
Oral [A]-(5) Marine  (Resource analyses & manage- ments)	Brendan O' SHEA (26)	11:10-11:30	Sampling, mapping, estimating and harvesting fisheries resources by trawling using geostatistics: the case study of the snow crab fishery in the Southwest Gulf of St. Lawrence, Canada	<u>Gérard Y. CONAN(36)</u> Robert HACHÉ, Jean Gilles CHIASSON Joël GIONET	<b>65</b>
		11:30-11:50	New Zealand's National Aquatic Biodiversity Information System (NABIS) : a case study in building a web based GIS for policy makers and planners (not scientists)	<u>Kim DUCKWORTH (31)</u>	<b>66-67</b>
		11:50-12:10	Effective fisheries Monitoring Control and Surveillance (MCS) will advance with the intelligent and automatic use of satellite surveillance information	<u>Brendan O' SHEA (26)</u>	<b>68-69</b>
		<b>12:10-14:00</b>	<b>Complimentary lunch by the Organizer (SFU style Chinese buffet lunch at the dining room)</b>		
	Manuel AFONSO- DIAS (70)	14:00-14:20	Evaluating the timing of stocking of chum salmon ( <i>Oncorhynchus keta</i> ) in Hokkaido, northern Japan, using the remote sensing and GIS techniques	<u>Yasuyuki MIYAKOSHI(48)</u> Sei-ichi SAITOH Hironobu OHDATE Masayuki TAKADA Hiroki ASAMI Makoto FUJIWARA Mitsuhiro NAGATA	<b>70-71</b>
		14:20-14:40	Analysis of the Portuguese crustacean fleet activity in 2003 using VMS and landings data: fishing effort, catch rates and fishing regime	<u>Manuel AFONSO-DIAS (70)</u> Carlos PINTO André PIRES	<b>72</b>
		14:40-15:00	Mapping species distribution for management of demersal trawling off California	<u>Janet MASON (44)</u>	<b>73</b>

**August 26 (Friday)**  
**Panel discussion (Sum-up Session),**  
**Award ceremony for best presentations and Closings**

*[Time keeper] Feng Bo (94), [Operation of PC & projector & Microphone distributor] SiquanTIAN (77)*

Subject	Moderator	Time	Title	
Panel discussion	<p style="text-align: center;"><i>Chair</i>  <b>James M. KAPETSKY (1)</b></p> <p style="text-align: center;"><i>Co-chair</i>  <b>William FISHER (27)</b></p>	9:00-11:00	<p style="text-align: center;"><b>(Sum-up Session)</b></p> <p>The objectives of this Session are to highlight progress being made and to discuss ways to move forward. Each panelist will summarize trends in his subject area and there will be discussion from the floor that will help demonstrate where fisheries spatial analyses should now be going. Progress of the three themes in this Symposium is especially emphasized, i.e., (a) effective and affordable GIS for fishery and aquatic information especially for the people in the developing countries, (b) spatial fish stock assessment modelling and (c) spatial fisheries resource management. Each subject plans to be completed in <b><u>20 minutes including presentations and discussions with the floor (10minutes for presentations and 10 minutes for discussions are ideal and suggested)</u></b>. Detail framework of this Session will be announced at the beginning of this Session from the Chair.</p>	<p style="text-align: center;"><b>Panellists in six subjects:</b></p> <p><b>(1) <u>Richard TAYLOR (78)</u></b> GIS systems &amp; theme (a)</p> <p><b>(2) <u>Paul EASTWOOD (6)</u></b> Marine: Habitat, its modeling and theme (b)</p> <p><b>(3) <u>Teruhisa KOMATSU (71)</u></b> Maine : Fisheries oceanography, ecosystem and remote sensing</p> <p><b>(4) <u>Brendan O' SHEA (26)</u></b> Marine: Fisheries, management and theme (c)</p> <p><b>(5) <u>William FISHER (27)</u></b> Fresh-inland water, aquaculture and mariculture.</p> <p><b>(6) <u>James M. KAPETSKY (1) (Chair)</u></b> General (overall) comments</p> <p style="text-align: center;"><i>Rapporteur</i></p> <p style="text-align: center;"><b>(Chief) <u>Robert MIKOL (16)</u></b>  <u>Kim DUCKWORTH (31)</u>                      and  <u>Janet MASON (44)</u></p>
		11:00-11:30	<b>Tea/coffee break (Room 204)</b>	
Awards ceremony	<b>Liu-Xiong XU (56)</b>	11:30-12:00	<p style="text-align: center;"><b>(Awards ceremony)</b></p> <p>Awards will be provided to three best presenters, i.e., one is from students or junior fellows for all categories (oral, poster or PC demo), the second is from oral presenters in general (non-students/junior fellows) and the last one is from poster or PC demo presenters in general (non-students/junior fellows). Each award recipient will get US\$200 cash.</p>	<p style="text-align: center;"><b>Award committee members (referees)</b></p> <p style="text-align: center;"><b><u>(Chief) Liu-Xiong XU (56)</u></b>  <u>Kiyoshi ITOH (5)</u>  <u>Apiradee KULTHAI (84)</u>  <u>Boonchai STENSCHOLT (35)</u></p>
Closings			Last remarks and the future.	<b>Tom NISHIDA (Convener)</b>

<h2 style="margin: 0;">Poster Presentations</h2> <p style="margin: 0;">Room 204 (Gusest house compound)</p> <p style="margin: 0;">Formal Sessions: 3-5pm, Aug. 23 (Tues) and 3:20-5pm, Aug. 24(Wed)</p>
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No.	Subject	Title	Authors <i>The presenter is underlined.</i> ( ): registration number	Abstract (page)
1	[A]-(2) Maine (Fisheries)	Use of GIS technology and grey relevant analysis for the analysis of spatial data on tuna purse seine fishery in Western and Central Pacific Ocean	<u>Gouping ZHU(63)</u> Liu-Xiong XU Song YANG Xin-jun CHEN	28
2		Analysis on catch distribution of <i>Ommastrephes batrami</i> in squid jigging fishery and the relationship between fishing ground and SST in the North Pacific Ocean in 2004	<u>Bi-lin LIU(68)</u> Xin-Jun CHEN	77
3		A software toolkit for identifying fishing grounds and trips from automatic satellite positioning data	<u>Pedro Bordalo-MACHADO (15)</u> Ricardo Tavares SOUSA João Gustavo MATOS	78-79
4		Creating an annual fishing atlas from fishing data	<u>Robert MIKOL (16)</u> Zhou YINGQI Loh-Lee LOW	80-81
5		A space-based diagnosis on the fishing ground of purple flying squid <i>Symlectoteuthis oualaniensis</i> in Northwest Indian Ocean	<u>Xiaoming YANG(64)</u> Xin-jun CHEN Siquan TIAN	84
6		Use of GIS for the analysis of small scale fishery in a Marine Protected Area	Anna Maria BELTRANO <u>Leonardo CANNIZZARO(50)</u> Sergio VITALE Maria A. PECORARO Antonino MILAZZO Giacomo NORRITO	85
7		Preliminary Study on Correlation of Dissolved Oxygen Difference from 50 to 150m Water Layers Versus Longline Hooking rate of Bigeye Tuna ( <i>Thunnus obesus</i> ) in the Indian Ocean by GIS	<u>Feng BO(94)</u> Liu-Xiong XU	104/105 (attached in this volume)
8	[A]-(3) Marine Oceanography & marine ecosystem)	Preliminary stock assessment of the Atlantic sea cucumber <i>Isoistichopus badionotus</i>	Mario MICELI <u>Philip Conrad SCOTT (72)</u> Lindsay G. ROSS	82-83
9		Preliminary study on the catch distribution of jumbo flying squid and its relationship with sea surface temperature in the southeastern Pacific Ocean	<u>Xiaohu ZHAO(67)</u> Xin-jun CHEN	86
10	[A]-(4) Maine (Remote-sensing and acoustics)	Monitoring the post-larval stages of Japanese anchovy ( <i>Engraulis japonicus</i> ) "shirasu" in the Kii Channel using a quantitative echo sounder	<u>Atsumu WATANABE (21)</u> Kazushi MIYASHITA Ryuichi MATSUKURA Saho MORIOKA Yoshihiro IKEWAKI Keisuke MORI	87
11		GIS can support an acoustic survey design around the hill: An example of "Hachirigase" hill in the Sea of Japan	Hideaki TANOUE Akira HAMANO <u>Teruhisa KOMATSU (71)</u>	88
12	[A]-(5) Marine (Resource analyses & manage- ments)	Quantifying spatial variability of European Hake <i>Merluccius merluccius</i> (Linnaeus, 1758) along sardinian seas (Central Mediterranean) using geostatistical tools	<u>Matteo MURENU (75)</u> Andrea ORTU Cristina TOLA MASALA Danila CUCCU Angelo CAU	89
13		Estimation of Antarctic minke whale abundance in the Weddell Sea region of the Antarctic using a GAM-based spatial model with special reference to the animals in the unsurveyed large polynya	<u>Hiroto MURASE (86)</u> Hiroyuki SHIMADA Toshihide KITAKADO	90
14		GIS for commercial fish stock assessments	<u>Georgiy MOISEENKO (18)</u> Oleg BULATOV	103
15	[A]-(6) Marine (geo- statistics, Modelling, resources analyses)	Application of Bayesian statistics inference techniques based on GIS to the relationship between tuna fishing grounds and environment factors	<u>Xuedong CHEN(30)</u> Wei FAN Xue Sen CUI	91
16		Exploring ice conditions in the far east Marginal Seas	Gennady KHEN Rimma KRAVCHENKO Larisa MATYUSHENKO Georgiy MOISEENKO <u>Igor SHEVCHENKO (38)</u>	92-93
17	[B]-(3) Fresh water (Ecology)	GIS-based assessment of land cover changes at Tishomingo National Wildlife Refuge, U.S.A.	<u>William L. FISHER (27)</u> Greg CUMMINGS	94
18	[B]-(6) Fresh water (modelling)	Seeking necessary conditions towards the sustainable use of irrigation ponds – from the participatory planning point of view	<u>Kenichi ISHIDA (54)</u>	95

## Demonstrations of software & systems by PC

Room 204 (Gusest house compound)

Formal Sessions: 3-5pm, Aug. 23 (Tues) and 3:20-5pm, Aug. 24(Wed)

No.	Subject	Titile	Authors <i>The presenter is <u>underlined.</u></i> ( ): registration number	Abstract (page)
1	<b>[c]-(2) Softwares, &amp; Systems</b>	Expanding research efforts with the commercial fishing industries and integrating methods to share information over the internet	<b><u>Richard TAYLOR (78)</u></b> Norman VINE	<b>96-97</b>
2		Introduction to Marine Explorer	<b><u>Environmental Simulation Laboratory (ESL), Inc. (5)</u></b>	<b>98</b>
3		Visualise before you analyse – The unique challenges in working with complex temporal and spatial (4-dimensional) data derived from modern fisheries sonar systems.	<b><u>Tim PAULY (19)</u></b> Matthew WILSON	<b>99</b>
4		The Pan-European Cephalopod Geographic Information System	<b><u>J. WANG (12)</u></b> G. J. PIERCE M. B. SANTOS	<b>100</b>
5		GISFish: The FAO Global Gateway to GIS, Remote Sensing and Mapping for Aquaculture and Inland Fisheries	<b><u>James M. KAPETSKY (1)</u></b> José Aguilar-MANJARREZ	<b>101</b>
6		New developments on <i>GeoCrust</i> , a dedicated GIS to estimate and map fishing effort and catch rates for the Portuguese crustacean trawl fishery	<b><u>Carlos PINTO (62)</u></b> Joana SIMÕES Manuel AFONSO-DIAS	<b>104</b>
7		<b>[A]-(5) Marine (Resource analyses &amp; Manage- ments)</b>	CEFAS interactive Spatial Explorer and Administrator (iSEA), web-based GIS	<b><u>Paul EASTWOOD (6)</u></b> Colin KIRK Keith WINPENNY

*Note: the internet facilities are avaibale.*