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CURRICULUM VITAE

I was born on 8 April 1958 at Komiža (Vis island), Croatia. I received my primary and secondary education in Split, and in 1976 enrolled in the Faculty of Science of the University of Zagreb, Department of Physics.

In 1981 I graduated and obtained my degree as graduate engineer of physics, field of study: Geophysics with Meteorology.

My first employment was in 1982 at the Oceanographic Department of the Hydrographic Institute. Between 2000 and 2004 I performed the duties of the Head of Department. In 2004 I took up the post of Assistant Director for Oceanography and Scientific Development at the Hydrographic Institute of the Republic of Croatia. I was appointed as Director of the Institute in March 2014, and have performed this duty to date.

In the period between 2004 and 2009 I was a member of the Governing Council of the Hydrographic Institute of the Republic of Croatia.

My professional career as oceanographer started with multidisciplinary cruises in the Adriatic Sea onboard s/v "*Andrija Mohorovičić*". I gained valuable experimental experiences during continuous oceanographic measurements on oil and gas exploration platforms.

In 1984 I enrolled in the postgraduate study of natural sciences at the Faculty of Science of the University of Zagreb, field of study Oceanography. In April 1988 I received my master's degree defending the master's thesis under the title "Influence of Atmosphere on Forced Sea Level Oscillations on Eastern Coast of the Adriatic Sea". In October 2004 I earned my doctor's degree with the dissertation entitled "Barotropic and Baroclinic Waves in Wider Area of Lastovo Channel".

I further improved my professional capabilities during short training courses at "Deutsches Hydrographisches Institut", Hamburg, "Institut fuer Meereskunde", Kiel, "METU Institute", Erdemli, "Istituto per lo Studio della Dinamica delle Grandi Masse", Venice, "Naval Postgraduate School", Monterey (USA) and Norwegian Hydrographic Service, Stavanger. I have been involved as member of the expert group of the International Hydrographic Organization (IHO), Monaco, and the Mediterranean Science Commission (CIESM), Monaco.

In the period between 2005 and 2009 I performed the duties of project manager in CRONO HIP Project (Croatian-Norwegian Hydrographic Information Project), through

which the Hydrographic Institute of the Republic of Croatia significantly modernized its "production line" from the hydrographic survey by modern multibeam echosounder, and implementation of sophisticated database of hydrographic, nautical and oceanographic data, to the production of electronic navigational charts (ENC) and paper navigational charts from the same database.

During two ordinary sessions of the International Hydrographic Conference I was a member of the Croatian delegation, while at the 5th Extraordinary International Hydrographic Conference that took place in Monaco in October 2014, I was the head of the Croatian delegation.

I have published 136 scientific and professional papers (as author and co-author), 87 of which in international peer-reviewed scientific journals/proceedings. Moreover, I have participated in more than 250 studies and project reports of the Hydrographic Institute of the Republic of Croatia in the field of hydrography, geophysics and oceanology.

During my professional career I have participated in the work of expert teams for the delimitation of maritime boundaries of the Republic of Croatia, based on the accepted legal principles detailed in the United Nations Convention on the Law of the Sea.

I was supervisor in the production of eight environmental impact studies, as well as associate author of some 20 environmental impact studies.

A handwritten signature in blue ink, appearing to read "Nenad Leder".

Nenad Leder

LIST OF PUBLISHED PAPERS

1. Scientific papers

1.1 Scientific papers published in CC-SCI journals

Viličić, D., Leder, N., Gržetić, Z., Jasprica, N., 1995. Microphytoplankton in the Strait of Otranto (Eastern Mediterranean), *Marine Biology*, 123, 619-630.

Vilibić, I., Leder, N., 1996. Long-term variations of Mediterranean Sea level calculated by spectral analysis, *Oceanologica Acta*, 19, 599-607.

Vilibić, I., Leder, N., Smirčić, A., 1998. Forced and free response of the Adriatic sea level, *Il Nuovo Cimento C*, 21, 439-451.

Leder, N., Smirčić, A., Vilibić, I., 2000. The role of physical oceanography research in the process of marine environmental Assessment – Example of Cavtat, *Periodicum Biologorum*, 102, Supplement 1, 107-113.

Orlić, M., Leder, N., Pasarić, M., Smirčić, A., 2000. Physical properties and currents recorded during September and October 1998 in the Velebit Channel (East Adriatic), *Periodicum Biologorum*, 102, Supplement 1, 31-37.

Leder, N., 2002. Wind-induced internal wave dynamics near the Adriatic shelf break, *Continental Shelf Research*, 22, 445-463.

Leder, N., Orlić, M., 2004. Fundamental Adriatic seiche recorded by current meters, *Annales Geophysicae*, 22, 1449-1464.

Vilibić, I., Domijan, N., Orlić, M., Leder, N., Pasarić, M., 2004. Resonant coupling of a traveling air-pressure wave with the east Adriatic coastal waters, *Journal of Geophysical Research – Oceans*, 109, C100001; doi:10.1029/2004JC002279.

Orlić, M., Dadić, V., Grbec, B., Leder, N., Marki, A., Matić, F., Mihanović, H., Beg Paklar, G., Pasarić, M., Pasarić, Z., Vilibić, I., 2006. Wintertime buoyancy forcing, changing seawater properties, and two different circulation systems produced in Adriatic, *Journal of Geophysical Research*, 111, C03S07, doi:10.1029/2005JC003271 [printed 112(C3), 2007].

Duplančić Leder, T., Leder, N., Lapaine, M., 2007. Multiscale ENC Data Management on an Archipelagic Sea Area – Example of the East Adriatic Coast, *Journal of Navigation*, 60, 315-326, doi:10.1017/S0373463307004195.

Petrinec, B., Franić, Z., Leder, N., Tsabarlis, C., Bituh, T., Marović, G., 2010. Gamma radiation and dose rate investigations on the Adriatic islands of magmatic origin, *Radiation Protection Dosimetry*, 1-9, doi:10.1093/rpd/ncp302.

Orlić, M., Beg Paklar, G., Dadić, V., Leder, N., Mihanović, H., Pasarić, M., Pasarić, Z., 2011. Diurnal upwelling resonantly driven by sea breezes around an Adriatic island, *Journal of Geophysical Research*, 116, C09025, doi:10.1029/2011JC006955.

Lončar, G., Leder, N., Paladin, M., 2012. Numerical modelling of an oil spill in the northern Adriatic, *Oceanologia*, 54 (2), doi:10.5697/oc.54-2.143.

1.2 Scientific papers published in other international peer-reviewed publications

Leder, N., Ferenčak, M., Vučak, Z., 1987. Oscilacije na inercijalnom periodu u sjevernom Jadranu, *Geofizika*, 4, Zagreb, 111-127.

Smirčić, A., Vučak, Z., Gržetić, Z., Leder, N., Ferenčak, M., Gačić, M., 1987. Opis eksperimenta i neki preliminarni rezultati oceanografskih istraživanja u području Velebitskog kanala, Senjskih vrata i Kvarnerića - Mart 1986, *Geofizika*, 4, Zagreb, 95-109.

Leder, N., 1988. Storm surges along the east coast of the Adriatic Sea, *Acta Adriatica*, 29 (1/2), 5-20.

Leder, N., Smirčić, A., Ferenčak, M., Vučak, Z., 1992. Some results of current measurements in the area of the Otranto Strait, *Acta Adriatica*, 33 (1/2), 3-16.

Leder, N., Morović, M., 1996. Ecological study of gas fields in the northern Adriatic - 2. Climate characteristics, *Acta Adriatica*, 37 (1/2): 9-15.

Morović, M., Gržetić, Z., Leder, N., 1996. Ecological study of gas fields in the northern Adriatic - 7. Thermohaline and optical properties, *Acta Adriatica*, 37 (1/2): 89-108.

Leder, N., Smirčić, A., Gržetić, Z., 1997. Optimum sewer locations and circulation investigations in closed channel areas of the east Adriatic coast, *Water Pollution 97 - Modelling, Measuring and Prediction - Fourth international conference on water pollution at Lake Bled*, Editors R. Rajar and C.A. Brebbia, Computational Mechanics Publications, 195-204.

Smirčić, A., Leder, N., Vilibić, I., 1998. Surface Waves in the Southern Adriatic Area, *International symposium on Water Management and Hydraulic Engineering*, Dubrovnik, Book 1, 461-471.

Smirčić, A., Vilibić, I., Leder, N., Gržetić, Z., 1998. Diffusion experiment in the Split harbour (middle Adriatic Sea), In: *Oil and Hydrocarbon Spills, Modelling, Analysis and Control* (Eds. R. Garcia-Martinez and C. A. Brebbia), Computational Mechanics Publications, Southampton, 267-275.

Leder, N., Smirčić, A., Vilibić, I., 1998. Extreme values of surface wave heights in the northern Adriatic, *Geofizika*, 15, 1-13.

Požar-Domac, A., Bakran-Petrcioli, T., Filipić, P., Jaklin, A., Leder, N., Mužinić, J., Olujić, G., Pallaoro, A., Sinovčić, G., Smirčić, A., Šimunović, I., Šojat, V., Vidić, S., Vučetić, M., Vučetić, V., Zahtila, E., Zavodnik, D., Zavodnik N., 1998. The Silba Marine Park - preliminary research of the main characteristics of the area establishment of specially protected area, and marine park managing organisation, *Periodicum Biologorum*, 100, 7-18.

Viličić, D., Leder, N., Gržetić, Z., 1998. A study of microphytoplankton across the longitudinal front in the Strait of Otranto (May 1990), *Periodicum Biologorum*, 100, 53-58.

Vilibić, I., Smirčić, A., Leder, N., Gržetić, Z., 1999. Sewage outfalls in channel area: the Zadar and Pašman Channels (east Adriatic), *Water Pollutions V, Modelling, Measuring and Prediction*, Editors: P. Anagnostopoulos and C.A. Brebbia, WIT Press, 85-94.

Pršić, M., Smirčić, A., Leder, N., 1999. Adriatic High Sea State Characteristics, *Proc. of the Intl. MEDCOAST Conference on Wind and Wave Climate of Mediterranean and Black Sea, WIND & WAVE CLIMATE'99, March 30 – April 2, 1999*; Editors: S. Abdalla and E. Ozhan Antalya, Turkey, 277-293.

Vilibić, I., Leder, N., Smirčić, A., 2000. Storm surges in the Adriatic Sea: An impact on the coastal infrastructure, *Periodicum Biologorum*, 102, Supplement 1, 483-487.

Požar-Domac, A., Zavodnik, D., Jaklin, A., Zahtila, E., Smirčić, A., Pallaoro, A., Leder, N., Sinovčić, G., Radošević, M., Olujić, G., Kružić, P., Zavodnik N., Žuljević, A., Bakran-Petrcioli, T., Juračić, M., Antolić, B., 2000. Project «Biodiversity preservation in the Adriatic Sea» - Specially protected area «Palagruža», *Periodicum Biologorum*, 102, Supplement 2, 49-57.

Vilibić, I., Orlić, M., Čupić, S., Domijan, N., Leder, N., Mihanović, H., Pasarić, M., Pasarić, Z., Srdelić, M., Strnić, G., 2005. A new approach to sea level observations in Croatia, *Geofizika*, 22, 21-57.

1.3 Scientific papers published in domestic peer-reviewed journals

Leder, N., 1986. Karakteristike prizemnog i visinskog vjetra u području od Splita do Palagruže za vrijeme juga u Splitu, *Hidrografska godišnjak 1982/83*, Split, 67-90.

Leder, N., 1986. Sinoptička klasifikacija tipova vremena za vrijeme juga u Splitu, *Hidrografska godišnjak 1984/85*, Split, 27-40.

Leder, N., 1988. Statistički model utjecaja atmosfere na prisilno kolebanje razine mora u luci Split, *Hidrografska godišnjak 1986*, Split, 25-46.

Leder, N., Vukojević N., 1991. Utjecaj termokline na odabiranje lokacija za ispuš otpadnih voda, *Hidrografska godišnjak 1989*, Split, 61-69.

Smirčić, A., Leder, N., 1992. Termohalinska i dinamička obilježja akvatorija Kumborskog tjesnaca, *Hidrografska godišnjak 1990-1991*, Split, 37-57.

Leder, N., 1992. Primjena spektralne analize, analize sistema i rotacione spektralne analize u oceanologiji i meteorologiji, *Hidrografska godišnjak 1990-1991*, Split, 19-36.

Korbar, A., Leder, N., 1996. Uredaj trima na malim podmornicama, *Brodogradnja*, 44 (3), Zagreb, 215-220.

Vilibić, I., Smirčić, A., Leder, N., 1996. Analiza ekstremnih vrijednosti visine razine mora na hrvatskoj obali Jadrana u razdoblju 1955-1995, *Izvanredne meteorološke i hidrološke prilike u Hrvatskoj*, 19, 125-130.

Bolanča, D., Leder, N., 1998. Problem evidencije i obilježavanje pomorskog dobra, *Zbornik radova Pravnog fakulteta u Splitu*, 137-143.

Smirčić, A., Vilobić, I., Leder, N., 2000. Usporedba značajki površinskih valova u Jadranском moru, *Zbornik radova Visoke pomorske škole u Splitu*, 37-46.

Andročec, V., Lončar, G., Leder, N., 2008. Development of the Ecological Models of the Adriatic Sea, *Annual 2008 of the Croatian Academy of Engineering*, 363-384.

1.4 Book chapters

Pršić, M., Marušić, J., Tropan, Lj., Vuković, Ž., Žugaj, R., Pollak, Z., Barilić, D., Tedeschi, S., Tušar, B., Kuspilić, N., Smirčić, A., Leder, N., 1995. *Hrvatsko vodoprivredno nazivlje, Građevni godišnjak '96; urednik Simović, V., Hrvatsko društvo građevinskih inženjera*.

Vilibić, I., Leder, N., Smirčić, A., Gržetić, Z., 1997. Dugoročne promjene razine mora na hrvatskoj obali Jadrana, *Tisuću godina prvoga spomena ribarstva u Hrvata, Hrvatska akademija znanosti i umjetnosti, (urednik B. Finka)*, Zagreb, 437-445.

Leder, N. (Ed.), 2004. Adriatic Sea Pilot, Chapter B-I, *Hydrographic Institute of the Republic of Croatia*, Split, 21-37.

1.5 Peer-reviewed scientific papers published in the proceedings of international scientific conferences

Leder, N., 1986. Storm surges along the east coast of the Adriatic Sea, *Rapport du Commission Internationale pour l'exploration scientifique de la Mer Mediteranee*, 30/2, 171.

Leder, N., Smirčić, A., Ferenčak M., and Vučak, Z., 1990. Some results of current measurements in the Strait of Otranto, *Rapp. on 1st International Symposium "Ecological problems in the Adriatic Sea"*, Institute of Oceanography and Fisheries, Split, 9-10.

Bone, M., Leder, N., 1992. Seiche of eight and six hour periods in the Adriatic Sea, *Rapport du Commission Internationale pour l'exploration scientifique de la Mer Mediteranee*, 33, 330.

Leder, N., 1992. Observation of internal waves in the Middle Adriatic Sea, *Rapport du Commission Internationale pour l'exploration scientifique de la Mer Mediteranee*, 33, 334.

Viličić, D., Leder, N., Gržetić, Z., Jasprica, N., 1995. Phytoplankton and oceanographic conditions in the Strait of Otranto (Eastern Mediterranean), *Rapport du Commission Internationale pour l'exploration scientifique de la Mer Mediteranee*, 34, 218.

Leder, N., Smirčić, A., Gržetić, Z., 1995. Seasonal variability of dynamical and thermohaline properties in the Otranto Strait area - 1989/1990, *Rapport du Commission Internationale pour l'exploration scientifique de la Mer Mediteranee*, 34, 187.

Vilibić, I., Leder, N., Smirčić, A., Gržetić, Z., 1995. Seiches inside the Middle Adriatic islands, *Workshop on "Mediterranean Sea - Circulation, Strait Exchange and Dense Water Formation Processes"*, Trieste, October.

Vučak, Z., Legović, T., Leder, N., Smirčić, A., 1995. Comparison of results of direct current measurements and GHER 3D model, *Workshop on "Mediterranean Sea - Circulation, Strait Exchange and Dense Water Formation Processes"*, Trieste, October.

Smirčić, A., Beg-Paklar, G., Dadić, V., Grbec, B., Leder, N., Vilibić, I., 1995. Circulation in the channel area along the eastern coast of the Middle Adriatic (Pašmanski kanal and Zadarski kanal), *Workshop on "Mediterranean Sea - Circulation, Strait Exchange and Dense Water Formation Processes"*, Trieste, October.

Vilibić, I., Leder, N., 1997. Free and forced response of the Adriatic sea level, *6th EMINar*, Sali, Croatia, 2-6 April.

Vilibić, I., Orlić, M., Smirčić, A., Leder, N., 1998. Surface seiches and internal Kelvin waves observed off Zadar (east Adriatic), *Rapport du Commission Internationale pour l'exploration scientifique de la Mer Mediteranee*, 35, 206-207.

Leder, N., Beg-Paklar, G., Gržetić, Z., Smirčić, A., Vilibić, I., 1998. Wind-driven currents in the channel area: an example of the Channels Zadarski kanal and Pašmanski kanal (east Adriatic coast), *Rapport du Commission Internationale pour l'exploration scientifique de la Mer Mediteranee*, 35, 166-167.

Viličić, D., Leder, N., Gržetić, Z., 1998. Seasonal phytoplankton distribution in the offshore Southern Adriatic waters, *Rapport du Commission Internationale pour l'exploration scientifique de la Mer Mediteranee*, 35, 506-507.

Grbec, B., Morović, M., Zore-Armanda, M., Leder, N., 1998. Interannual salinity fluctuations in the middle Adriatic Sea, *Rapport du Commission Internationale pour l'exploration scientifique de la Mer Mediteranee*, 35, 148-149.

Vilibić, I., Leder, N., Smirčić, N., 1998. Sea response of the area of Brač Channel (Middle Adriatic) on the extreme Sirocco event in November 1996, *International Workshop on "Oceanography of the Adriatic Sea"*, Trieste, September.

Vilibić, I., Leder, N., Smirčić, A., 1999. The climatology of the main Adriatic seiche, *EGS XXIV General Assembly*, The Hague, April.

Vilibić, I., Leder, N., Smirčić, A., 1999. Wind-driven dynamics of the Zadar and Pašman Channels (East Adriatic), *Geophysical Research Abstracts, 24th General Assembly, Hydrology, Ocean and Atmosphere, European Geophysical Society*, 1, 392.

Vilibić, I., Leder, N., Smirčić, A., 1999. Global sea level rise: a global and a regional perspective, *2nd European Ecological Modelling Conference*, Pula, Book of Abstracts, 60.

Leder, N., Duplančić, T., 2000. OIS - Oceanographic information system, *Periodicum Biologorum*, 102, Supplement 1, 715.

Smirčić, A., Leder, N., Vilibić, I., 2001. An analysis of diffusion characteristics in the harbour area (Split harbour, Adriatic Sea), *Rapport du Commission Internationale pour l'exploration scientifique de la Mer Mediteranee*, 36, 81.

Vilibić, I., Leder, N., Mihanović, H., Smirčić, A., Gržetić, Z., 2001. MEDGLOSS pressure gauge in the Split harbour: installation and preliminary analysis of data, *Rapport du Commission Internationale pour l'exploration scientifique de la Mer Mediteranee*, 36, 97.

Duplančić Leder, T., Leder, N., 2001. PILOT I – official sailing directions for eastern part of the Adriatic Sea, *The 21th International Cartographic Conference Mapping the 21st Century*, Bejing, 631.

Orlić, M., Dadić, V., Grbec, B., Leder, N., Beg Paklar, G., Ivanković, D., Marki, A., Matić, F., Mihanović, H., Pasarić, M., Pasarić, Z., Pavić, M., Vilibić, I., 2004. East Adriatic current in winter and spring 2003, *Rapport du Commission Internationale pour l'exploration scientifique de la Mer Mediteranee*, 37, 130.

Vilibić, I., Domijan, N., Leder, N., Orlić, M., 2004. Pressure-generated waves in the Middle Adriatic Sea, *Rapport du Commission Internationale pour l'exploration scientifique de la Mer Mediteranee*, 37, 151.

Mihanović, H., Leder, N. Domijan, N., Čupić, S., Strinić, G., Vilibić, I., Kierulf, Halfdan-Pascal, K., 2004. CGPS station collocated at Split tide gauge (Croatia), *Book of Abstracts of the Workshop on Observing and understanding sea level variations*, Eds.: Plag, Hans-Peter; Xiuhua Zhang, Malta, IOI - University of Malta, 25.

Vilibić, I., Domijan, N., Leder, N., Strinić, G., Orlić, M., Pasarić, M., 2004. ESEAS-RI in Croatia: a step towards sea level service, *Book of Abstracts of the Workshop on Observing and understanding sea level variations*, Eds.: Plag, Hans-Peter; Xiuhua Zhang, Malta, IOI - University of Malta, 17-18.

Leder, N., Mihanović, H., Vilibić, I., 2004. Thermohaline fluctuations during East Adriatic Coastal Experiment EACE (November 2002 – June 2003), *Venice Adriatic Workshop, June 14-16 2004, Final Report*, Venice, 36.

Orlić, M., Dadić, V., Grbec, B., Leder, N., Matić, F., Mihanović, H., Beg Paklar, G., Pasarić, M., Pasarić, Z., Vilibić, I., 2005. Wintertime buoyancy forcing produces two different circulation systems in the Adriatic, *Geophysical Research Abstracts*, 7, 02532.

Orlić, M., Dadić, V., Grbec, B., Leder, N., Matić, F., Mihanović, H., Beg Paklar, G., Pasarić, M., Pasarić, Z., Vilibić, I., 2005. Two different circulation systems produced by wintertime buoyancy forcing of the Adriatic, *The Oceanography Society's 2005 International Ocean Research Conference - Paris*, 124.

Vilibić, I., Beg Paklar, G., Čupić, S., Dadić, V., Domijan, N., Gržetić, Z., Ivanković, D., Leder, N., Mihanović, H., Orlić, M., Pasarić, M., Pasarić, Z., Srdelić, M., Strinić, G., 2005. Recent sea level activities in Croatia, *Book of Abstracts*, Eds.: Ziang, Xiuhua; Lilja Bye, Bente; Vilibić, Ivica, Split, Hrvatski hidrografski institut, 36.

Mihanović, H., Domijan, N., Leder, N., Čupić, S., Strinić, G., Gržetić, Z., 2006. CGPS station collocated at Split tide gauge, *GIS Application and Development*, Zagreb, 55-61.

Duplančić Leder, T., Leder, N., 2006. HIDRIS system improving, *GIS Application and Development*, Zagreb, 62-66.

Čupić, S., Domijan, N., Mihanović, H., Leder, N., Strinić, G., Gržetić, Z., 2006. Five decades of continuous tide gauge measurements at Split-harbour (1956-2006), *GIS Application and Development*, Zagreb, 67-73.

Domijan, N., Čupić, S., Mihanović, H., Leder, N., Strinić, G., Gržetić, Z., 2007. A reappraisal of the extreme sea levels along the Croatian Adriatic coast, *Rapport du Commission Internationale pour l'exploration scientifique de la Mer Mediteranee*, **38**, 138.

Orlić, M., Beg Paklar, G., Bencetić Klaić, Z., Dadić, V., Grbec, B., Leder, N., Mihanović, H., Morović, M., Pasarić, M., 2007. A fresh look at dynamics of the Adriatic shelf-break area, *Rapport du Commission Internationale pour l'exploration scientifique de la Mer Mediteranee*, **38**, 178.

Orlić, M., Beg Paklar, G., Dadić, V., Leder, N., Mihanović, H., Pasarić, M. and Pasarić, Z., 2007. Periodic upwelling/downwelling observed in the Adriatic Sea, *Seventh Conference on Coastal Atmospheric and Oceanic Prediction and Processes*, American Meteorological Society – San Diego, <http://www.ametsoc.org>.

Duplančić Leder, T. Leder, N., 2008. Croatian ENC Production Process – a new approach, *Proceedings ELMAR – 2008 (Ed. M. Grgić i S. Grgić)*, Zadar, 10.-12. September 2008, **2**, 397-400.

Leder, N., 2008. Mjerenje morskih struja, *Zbornik radova - Savjetovanje "Hidrološka mjerenja i obrada podataka"*, Građevinski fakultet Sveučilišta u Rijeci, Nacionalni park Plitvička jezera, 26-28 November 2008, 349-362.

Domijan, N., Čupić, S., Leder, N., Gržetić, Z., 2008. Mjerenje površinskih valova na moru, *Zbornik radova - Savjetovanje "Hidrološka mjerenja i obrada podataka"*, Građevinski fakultet Sveučilišta u Rijeci, Nacionalni park Plitvička jezera, 26-28 November 2008, 373-382.

Duplančić Leder, T., Leder, N., 2009. Estimation usability of the free software for transformation of geodetic coordinates between local and global datums – example of the Adriatic Sea, *24th International Cartographic Conference – The World's Geo-Spatial Solutions*, Santiago de Chile, ISBN 978-1-907075-02-5.

Pasarić, M., Čupić, S., Domijan, N., Leder, N., Orlić, M., 2010. Record-breaking sea levels in the northern Adriatic on 1 December 2008, *Rapport du Commission Internationale pour l'exploration scientifique de la Mer Méditerranée*, **39**, 157.

Leder, N., Domijan, N., Gržetić, Z., Mihanović, M., Mlinar, M., 2010. Monthly and seasonal oscillations of the Eastern Adriatic Current, *Rapport du Commission Internationale pour l'exploration scientifique de la Mer Méditerranée*, **39**, 134.

Leder, N., Andročec, V., Čupić, S., Domijan, N., Lončar, G., 2010. Evolution of surface wave spectra in extreme sea states along the eastern Adriatic open sea and channel areas, *Rapport du Commission Internationale pour l'exploration scientifique de la Mer Méditerranée*, **39**, 135.

Strinić, G., Čupić, S., Domijan, N., Leder, N., Mihanović, H., 2011. Distributed System for Remote Wave Data Collection and Visualization as a Part of Operational Oceanography in Croatia, *Mipro 2011 - GVS, Proceedings*, (Eds. P. Biljanović, K. Skala), Opatija, 335-338.

Leder, N., Duplančić Leder, T., 2011. Delineation of coastline and marine SDI in Croatia, *25th International Cartographic Conference – Enlightened View on Cartography and GIS*, Paris, 3-8 July 2011, CO 090.

Duplančić Leder, T., Leder, N., 2011. The history of publications „Symbols and abbreviations used on charts“, *25th International Cartographic Conference – Enlightened View on Cartography and GIS*, Paris, 3-8 July 2011, CO 320.

Duplančić Leder, T. Leder, N., 2012. Accuracy of coordinate transformations in GIS and AIS systems - example of the Adriatic Sea, *4th International Maritime Science Conference*, 16-17 June 2012, Split, Croatia, 174-178.

Leder, N., Duplančić Leder, T., 2012. Integration of the land and marine spatial data on the Croatian coastline, *4th International Maritime Science Conference*, 16-17 June 2012, Split, Croatia, 179-185.

1.6 Scientific peer-reviewed papers published in the proceedings of domestic scientific conferences

Leder, N., 1985. Statistički model utjecaja atmosfere na prisilno kolebanje mora u luci Split, *Geodezija u hidrologiji, hidrogradnji i hidrografiji - Zbornik radova, Savez geodetskih inženjera i geometara Jugoslavije*, Split, 321-346.

Leder, N., Vukojević, N., 1989. Utjecaj termokline na odabiranje lokacija za ispuš otpadnih voda, *IV konferencija o zaštiti Jadrana - Neum 1989*, 138.

Leder, N., Smirčić, A., Gržetić, Z., 1995. Istraživanje morskih struja i optimalno lociranje podmorskog ispusta otpadnih voda u području ušća rijeke Cetine, "I. Hrvatska konferencija o vodama", Dubrovnik, 24-27 May 1995, 487-495.

Leder, N., Smirčić, A., Gržetić, Z., 1995. Sezonske promjene strujanja u zapadnom akvatoriju otoka Mljet, Simpozij "Prirodne značajke i društvena valorizacija otoka Mljet", *Ekološke monografije 6, Hrvatsko ekološko društvo, Državna uprava za zaštitu kulturne i prirodne baštine, Nacionalni park Mljet*, Zagreb, 415-436.

Smirčić, A., Gržetić, Z., Leder, N., 1995. Doprinos istraživanja mora i podmorja u elektrifikaciji otoka, 2. znanstveni skup "Mediteranski koncept gospodarskog razvijanja Hrvatske", *Ekonomski fakultet- Split, Županijska komora Split*, Split, December 1995, 163-170.

Leder, N., Smirčić, A., Vilibić, I., Gržetić, Z., 1995. Značajke polja strujanja šireg akvatorija Kornatskog otočja, *Ssimpozij "Nacionalni park Kornati, općina Tisno u Županiji Šibenskoj"*, Murter, October.

Smirčić, A., Leder, N., 1996. Karakteristike ekstremnih stanja mora u području otoka Palagruža, *Zbornik radova "Palagruža - Jadranski dragulj"*, *Hrvatska pomorska meteorološka služba, Hrvatsko meteorološko društvo - Split, Matica hrvatska - Kaštela*, Split-Kaštela, 345-351.

Vilibić, I., Leder, N., Smirčić, A., 1996. Rezultati spektralne analize podataka razine mora u širem akvatoriju otoka Palagruže, *Zbornik radova "Palagruža - Jadranski dragulj"*, *Hrvatska pomorska meteorološka služba, Hrvatsko meteorološko društvo - Split, Matica hrvatska - Kaštela*, Split-Kaštela, 353-356.

Leder, N., Smirčić, A., Grbec, B., Gržetić, Z., Vilibić, I., 1996. Dinamička svojstva akvatorija Palagruškog praga, *Zbornik radova "Palagruža - Jadranski dragulj"*, *Hrvatska pomorska meteorološka služba, Hrvatsko meteorološko društvo - Split, Matica hrvatska - Kaštela*, Split-Kaštela, 339-343.

Leder, N., Gržetić, Z., Smirčić, A., Vilibić, I., 1998. Neki rezultati fizikalno-oceanografskih mjerena u istočnom dijelu Kaštelanskog zaljeva (Bazen Vranjic), *Zbornik "Kaštela kolijevka Hrvatske"*, Matica hrvatska - Kaštela, 359-366.

Leder, N., Krstulović, N., Kušpilić, G., Marasović, I., Šolić, M., 1998. Ekološko stanje u istočnom dijelu Kaštelanskog zaljeva (Bazen Vranjic) - zima 1994, *Zbornik "Kaštela kolijevka Hrvatske"*, Matica hrvatska - Kaštela, 432-438.

Vilibić, I., Leder, N., Smirčić, A., 1998. *Dugoperiodičke oscilacije razine mora u Kaštelanskom zaljevu*, *Zbornik "Kaštela kolijevka Hrvatske"*, Matica hrvatska - Kaštela, 373-377.

Smirčić, A., Leder, N., 1998. Površinski valovi uzrokovani burom u Kaštelanskom zaljevu, *Zbornik "Kaštela kolijevka Hrvatske"*, Matica hrvatska - Kaštela, 355-358.

Zore-Armarda, M., Dadić, V., Beg-Paklar, G., Leder, N., 1998. Analiza rezultata mjerena struja u Kaštelanskom zaljevu, *Zbornik "Kaštela kolijevka Hrvatske"*, Matica hrvatska - Kaštela, 338-345.

Vilibić, I., Leder, N., Smirčić, A., 1998. Neke karakteristike kolebanja razine mora Riječkog zaljeva, *Zbornik radova "Prirodoslovna istraživanja riječkog područja"*, Prirodoslovni muzej Rijeka, Rijeka, 223-232.

Leder, N., Smirčić, A., Vilibić, I., 1998. Neke karakteristike polja struja Riječkog zaljeva (NE akvatorij) - komunikacija Riječkog zaljeva sa Vinodolskim kanalom preko Tihog kanala, *Zbornik radova "Prirodoslovna istraživanja riječkog područja"*, Prirodoslovni muzej Rijeka, Rijeka, 213-222.

Gržetić, Z., Leder, N., 1998. Granice pomorskog dobra i pomorski katastar, *Pravni problemi instituta pomorskog dobra u Republici Hrvatskoj s posebnim osvrtom na luke otvorene za javni promet*, Udruga pravnika u gospodarstvu, Split, 11-15.

Smirčić, A., Leder, N., Vilibić, I., 1998. Značajke elemenata površinskih valova razvijenih stanja mora u akvatoriju sjevernog Jadrana, *XIII. simpozij "Teorija i praksa brodogradnje - SORTA '98"* - *Zbornik I*, 469-480.

Smirčić, A., Leder, N., Vilibić, I., 1998. Ekstremne povratne vrijednosti visina valova za područje sjevernog Jadrana, *Znanstveni skup "Andrija Mohorovičić - 140. obljetnica rođenja"*, Zagreb, 10-12 March, 493-506.

Vilibić, I., Smirčić, A., Leder, N., 1998. Procesi turbulencije i poniranja u obalnom području grada Splita, *Znanstveni skup "Andrija Mohorovičić - 140. obljetnica rođenja"*, Zagreb, 10-12 March, 485-492.

Vilibić, I., Leder, N., Smirčić, A., 1999. Ekstremna kolebanja razine Jadranskog mora, 2. *Hrvatska konferencija o vodama, Zbornik radova*, Dubrovnik, 319-324.

Bojanić, F., Leder, N., Smirčić, A., Vilibić, I., 1999. Oceanografska i hidrografska istraživanja u funkciji projektiranja podmorskih ispusta otpadnih voda, 2. *Hrvatska konferencija o vodama, Zbornik radova*, Dubrovnik, 335-341.

Smirčić, A., Gržetić, Z., Leder, N., Petričević, B., 2002. Hidrografsko-geološki i oceanografski istraživački radovi u hidrotehničkim projektima na moru i priobalju, *Zbornik radova «Urbana hidrologija», Hrvatsko hidrološko društvo, Hrvatske vode, EKO Kaštelanski zaljev, Vodovod i kanalizacija*, Split, 25-26 April 2002, 183-195.

Leder, N., Dadić, V., Grbec, B., Mihanović, H., Reić, P., Smirčić, A., Vilibić, I., 2003. Oceanografska istraživanja za potrebe "Integralnog projekta zaštite Kaštelanskog zaljeva – kanalizacijski sustav Kaštela – Trogir", 3. *Hrvatska konferencija o vodama, Zbornik radova*, Osijek, 317-326.

Vilibić, I., Olujić, G., Leder, N., Smirčić, A., 2003. Estuarij rijeke Zrmanje: termohalina svojstva i izmjena vodenih masa, 3. *Hrvatska konferencija o vodama, Zbornik radova*, Osijek, 497-502.

Duplančić Leder, T., Leder, N., 2003. Novi trendovi u hidrografiji i pomorskoj kartografiji u cilju boljeg gospodarenja morskim resursima, 3. *Hrvatska konferencija o vodama, Zbornik radova*, Osijek, 577-583.

Domijan, N., Leder, N., Čupić, S., 2005. Visinski datumi Republike Hrvatske, *Treći hrvatski kongres o katastru, Hrvatsko geodetsko društvo, Zbornik radova*, Zagreb, 7-9 March 2005, 345-350.

Duplančić Leder, T., Leder, N., Petričević, B. 2007. Poboljšanje HIDRIS sustava podacima višesnopnog dubinomjera, *Simpozij o inženjerskoj geodeziji, Hrvatsko geodetsko društvo, Zbornik radova*, Beli Manastir, 203-215.

Leder, N., Barbalić, S., Filipović, V., Barbalić, D. 2011. Prijedlog razgraničenja priobalnog mora Republike Hrvatske prema Okvirnoj direktivi o vodama, 5. *Hrvatska konferencija o vodama, Zbornik radova*, Opatija, 581-591.

Čupić, S., Domijan, N., Mihanović, H., Mlinar, M., Leder, N., Gržetić, Z., 2011. Klimatske promjene, porast razine mora na hrvatskoj obali Jadranu, 5. *Hrvatska konferencija o vodama, Zbornik radova*, Opatija, 593-600.

Mihanović, H., Mlinar, M., Čupić, S., Domijan, N., Leder, N., Gržetić, Z., 2011. Spektralna analiza površinskih valova uzrokovanih vjetrom u sjevernom Jadranu, 5. *Hrvatska konferencija o vodama, Zbornik radova*, Opatija, 1243-1251.

1.7 Scientific papers presented at international conference, abstract published in the proceedings

Orlić, M., Beg Paklar, G., Dadić, V., Leder, N., Mihanović, H., Pasarić, M., Pasarić, Z. 2008. Baroclinic coastal waves resonantly driven by diurnal-period winds around the island of Lastovo (Middle Adriatic), Eds: Orlić, M., Pasarić, M, *Workshop "Recent advances in Adriatic oceanography and meteorology", Book of abstracts*, Dubrovnik, 5-7 November 2008, Andrija Mohorovičić Geophysical Institute, Faculty of Science, University of Zagreb, 45.

Duplančić Leder, T., Leder, N., 2009. Infrastruktura prostornih podataka o moru kao integralni dio nacionalne infrastrukture prostornih podataka, *1. hrvatski NIPP i INSPIRE i Savjetovanje kartografija i geoinformacije (ur. Miljenko Lapaine)*, Varaždin, 39-40.

Duplančić Leder, T., Leder, N., 2010. Obalna crta u infrastrukturi prostornih podataka o moru, *2. hrvatski NIPP i INSPIRE i Savjetovanje kartografija i geoinformacije (ur. Miljenko Lapaine)*, Opatija, 25-27 November 2010, 44-45.

1.8 Professional papers

Domijan, N., Mihanović, H., Leder, N., Gržetić, Z. 2005. Harmonička i spektralna analiza morskih struja u sjevernom dijelu Riječkog zaljeva, *Pomorski zbornik*, 193-204.

Duplančić Leder, T., Leder, N., Vranješ, M. 2008. Primjena visinskih datuma Republike Hrvatske u hidrotehničkim projektima, „*I. Simpozij ovlaštenih inženjera geodezije – Hrvatska geodezija – izazovi struke u 21. stoljeću*“, *Zbornik radova, Hrvatska komora arhitekata i inženjera u graditeljstvu – razred inženjera geodezije*, Opatija 24-26 October 2008, 50-56.

Duplančić Leder, T., Kišević, M., Leder, N., Andričević, R. 2009. Praćenja rada ispusta otpadnih voda u Jadranskom moru GIS tehnologijom, „*II simpozij ovlaštenih inženjera geodezije - Geodezija i geoinformatika u projektiranju, izgradnji i upravljanju državnom i komunalnom infrastrukturom*“, *Zbornik radova, Hrvatska komora ovlaštenih inženjera geodezije*, Opatija 23-25 October 2009, 95-100.

Leder, N., Domijan, N., Gržetić, Z., 2010. Prognoza poplavljivanja hrvatske obale: zadatak operativne oceanologije, *Zbornik radova „Hrvatska platforma za smanjenje rizika od katastrofa“*, Državna uprava za zaštitu i spašavanje, Zagreb, 213-215.

Duplančić Leder, T., Leder, N., 2010. Obalna crta u infrastrukturi prostornih podataka o moru, „*III simpozij ovlaštenih inženjera geodezije - GIS, fotogrametrija i daljinska*

istraživanja u službi geodezije i geoinformatike, Zbornik radova, Hrvatska komora ovlaštenih inženjera geodezije, Opatija 22-23 October 2010, 120-125.

Lončar, G., Leder, N., Paladin, M., 2012. Periodi vlastitih oscilacija u akvatorijima Bakra, Malog Lošinja, Ista, Starog Grada i Vela Luke, *Hrvatske vode*, Vol. 83, 189-272.

1.9 Scientific reviews

Duplančić Leder, T., Leder, N., 2010. Povijest publikacije „Znakovi i skraćenice na pomorskim kartama“ u izdanju Hidrografskog instituta, *Geodetski list 2010*, 3, 193-215.

1.10 Qualifying papers

Leder, N., 1988. Utjecaj atmosfere na prisilno kolebanje razine mora na istočnoj obali Jadranskog mora, *Magisterski rad, Postdiplomski studij prirodnih znanosti Sveučilišta u Zagrebu*, 96 pp.

Leder, N., 2004. *Barotropni i baroklini valovi u širem području Lastovskog kanala*, *Disertacija, Prirodoslovno-matematički fakultet Sveučilišta u Zagrebu*, 140 pp.

1.11 Reviews in journals

Duplančić Leder, T., Leder, N., 2007. Protected Ecological and Fishery Zone (ZERP) - Exclusive Economic Zone: Issues of Fishery, Environmental Protection and Delimitation in the Adriatic on the Occasion of the 25th Anniversary of the UN Convention on the Law of the Sea - ZERP – gospodarski pojas: pitanja ribarstva, zaštite okoliša i razgraničenja na Jadranu o 25-godišnjici Konvencije UN o pravu mora, *Kartografija i geoinformacije*, 8, 162-163.

2. Scientific projects

2.1 Manager and assistant manager of international projects

Assistant manager of "East Adriatic Coastal Experiment" project within American-Croatian cooperation.

Assistant manager of "European Sea Level Service – Research Infrastructure (ESEAS-RI)" project within the so-called Fifth framework programme of the European Commission.

Assistant manager of "Internal Tidal Hydrodynamics and Ambient Characteristics" project within American-Croatian cooperation.

Leading expert for physical oceanography in "Coastal cities water pollution control project, IBRD 7226/HR; Part C1: Strengthening of coastal water monitoring network" of the Ministry of Environmental Protection, Construction and Physical Planning.

2.2 Active participation in the realization of scientific projects

I actively participated in the realization of the following scientific projects financed by the Ministry of Science, Education and Sports of the Republic of Croatia:

1. "Atmosphere – Adriatic System" (chief researcher Prof. Mirko Orlić, Ph.D.)
2. "Modern Nautical Cartography" (**chief researcher Nenad Leder, Ph.D.**)
3. "Croatian National Monitoring Programme – Adriatic Project" (project manager Nenad Smoljaka, Ph.D.)
4. Radioecology of the Adriatic Sea and Coastal Areas (project manager Zdenko Franić, Ph.D.)

3. Other projects

1. 2005-2009 CRONO HIP Project (Croatian-Norwegian Hydrographic Information Project), project manager
2. 2007 – 2009 Coastal cities water pollution control project IBRD 7226/HR, Part C1: Strengthening of coastal water monitoring network, leading expert for physical oceanography
3. 2008 – 2009 Coastal cities water pollution control project IBRD 7226/HR, Part C1: J Strengthening of coastal water monitoring network – Monitoring system of Hrvatske vode laboratory", project assistant manager
4. 2009 – 2010 Rijeka Gateway project – Wave Condition Monitoring within Port of Rijeka – Zagreb Pier, project manager
5. 2009 – 2010 "Hydrographic characteristics of the Adriatic Sea" project – Hrvatske vode, project manager
6. 2012 – 2013 "Sea flooding in coastal areas" project – Hrvatske vode, project manager
7. 2013 – ongoing. Coastal cities water pollution control project 2 IBRD 7640/HR, PART 3.2 Sea water quality monitoring, MENP/M-C-1 Consulting services for the definition of the Monitoring and Observation system for ongoing assessment of the Adriatic Sea, project assistant manager
8. 2013 – ongoing. "Joint Actions for Sea Pollution Prevention – JASPER", IPA Cross-border Programme Croatia – Montenegro, project manager

4. Scientific associations

Member of the following professional and scientific associations:

1. Expert group of the International Hydrographic Organization (IHO), Monaco
2. Mediterranean Science Commission (CIESM), Monaco
3. Croatian Meteorological Society
4. Croatian Maritime Law Association.



Split, 7 April 2015