ABSTRACT

Biographical and bibliographical information about Croatian cartographers have been collected systematically since 1995, firstly within the scientific project Croatian Cartographers, subsequently within the research project Cartography and New Technologies, which were both performed at the Faculty of Geodesy, University of Zagreb. After that, work on the collection and arrangement of material was continued within the frame of the Cartography of the Adriatic project. Basic sources of material about Croatian cartographers are databases or lists of maps in map collections, several monographs, map exhibition catalogues, symposium proceedings, various memorials, encyclopedias and lexicons, and lots of journals. Students at the graduate and postgraduate studies at the Faculty of Geodesy studied Croatian cartographers within the scope of their seminar papers, diploma and master theses and dissertations. A database with biographical and bibliographical information about Croatian cartographers was produced on the basis of all acquired material. The biographical lexicon Croatian Cartographers was published after 14 years of collecting data. According to our definition, Croatian cartographers are not only Croatians or people with Croatian origin who have lived all over the world and worked in the field of cartography. Members of other nations and nationalities who were born in Croatia, regardless of where they lived, and foreigners who lived and worked in Croatia, contributing to the cartography are also considered as Croatian cartographers. The paper deals with about thirty Croatian cartographers who are also Hungarian cartographers. Some of them were born in Hungary, some attended school there, but all of them were engaged in cartography in some way.
ABSTRACT

Biographical and bibliographical information about Croatian cartographers have been collected systematically since 1995, firstly within the scientific project Croatian Cartographers, subsequently within the research project Cartography and New Technologies, which were both performed at the Faculty of Geodesy, University of Zagreb. After that, work on the collection and arrangement of material was continued within the frame of the Cartography of the Adriatic project. Basic sources of material about Croatian cartographers are databases or lists of maps in map collections, several monographs, map exhibition catalogues, symposium proceedings, various memorials, encyclopedias and lexicons, and lots of journals. Students at the graduate and postgraduate studies at the Faculty of Geodesy studied Croatian cartographers within the scope of their seminar papers, diploma and master theses and dissertations. A database with biographical and bibliographical information about Croatian cartographers was produced on the basis of all acquired material. Biographical lexicon Hrvatski kartografi (Croatian Cartographers) was published after 14 years of collecting data.

According to our definition, Croatian cartographers are Croatians or people of Croatian origin who have lived all over the world and worked in the field of cartography. Members of other nations and nationalities who were born in Croatia, regardless of where they lived, and foreigners who lived and worked in Croatia, contributing to the cartography are also considered as Croatian cartographers. The paper deals with several Croatian cartographers who are also Hungarian cartographers. Some of them were born in Hungary, some attended school there, but all of them were engaged in cartography in some way.

1. INTRODUCTION

The earliest age of Croatian history is connected with the arrival to the present homeland (about 626), the formation of the Croatian state and the formation of the independent Kingdom of Croatia. Death of Stephen II caused the extinction of Trpimirović dynasty (about 1090) and a struggle for the throne. Then in Slavonia appeared Hungarian King Ladislas I (Hungarian: Szent Laszlo) and in the same time in Croatia and Dalmatia King Peter was elected. Defeat of the Croatian ruler and his death at Gvozd 1097 marked the end of the independent Croatian state. Croatian and Hungarian state community was founded after the coronation of Hungarian King Koloman (Hungarian: Kálmán) for the Croatian-Dalmatian king in Biograd in 1102. The relationship between Croatia and Hungary initially was like personal union that lasted from 1102 to August 29, 1526 when the Battle of Mohacs took place. This battle marked the end of the personal union between Croatia and Hungary because there died Hungarian-Croatian and Czech King Ludwig II (Heka 2011: 7).

On January 1, 1527 Croatian Parliament elected King Ferdinand I of Habsburg, when at the same time, Slavonia decided to elect Ivan Zapolja (Hungarian: János Szapolyai). Croatian nobility was expected that Ferdinand Habsburg, as he promised, would defend Croatia against the Turks. On December 16, 1526 in Požun most of the Hungarian nobility turned to Zapolja, like in Slavonia, and only a small part of them elected Ferdinand King of Hungary. Ferdinand I Habsburg had a title Hungarian-Croatian king from 1526/1527 to 1564, the Czech king from 1527 to 1564 and German-Roman emperor from 1556 to 1564. All the land, that he ruled, he considered as one country. He united it to the Habsburg Monarchy, which was renamed into Austro-Hungarian Empire after the Austro-Hungarian agreement in 1867. Under that name it existed until 1918 (Heka 2011: 102-103).

At the end of World War II it became clear that the Austro-Hungarian Empire would not survive and that the nations within its borders would seek their independence. In Zagreb in October 1918 it was formed the State of Slovenes, Croats and Serbs with the aim of creating an independent state on the South Slavic territory of the Austro-Hungarian monarchy. On October 29, 1918
Croatian Parliament declared the dissolution of all constitutional contacts with Austria and Hungary and the establishment of the State of Slovenes, Croats and Serbs (Goldstein 2008: 319-321).

Since then Croats and Hungarians have lived separately. The period of the 20th century Croatia was a part of the South Slavic community (State of Slovenes, Croats and Serbs, Kingdom of Serbs, Croats and Slovenes, Kingdom of Yugoslavia, Democratic Federal Yugoslavia, Federal Republic of Yugoslavia, Socialist Federal Republic of Yugoslavia). From that community Croatia moved away in 1991. On January 15, 1992 it was recognized as independent and sovereign state. The demolition of the Berlin Wall and formation of an independent and sovereign Republic of Croatia renewed the formerly close and friendly relationship between Hungary and Croatia. An ancient constitution that connected these two countries today is not only a historic fact but also the factor that is an evidence of history, culture and traditions that this two nations share.

Biographical and bibliographical information about Croatian cartographers have been collected systematically since 1995, firstly within the scientific project Croatian Cartographers, subsequently within the research project Cartography and New Technologies, which were both performed at the Faculty of Geodesy, University of Zagreb. After that, work on the collection and arrangement of material was continued within the frame of the Cartography of the Adriatic project. Basic sources of material about Croatian cartographers are databases or lists of maps in map collections, several monographs, map exhibition catalogues, symposium proceedings, various memorials, encyclopedias and lexicons, and lots of journals. Students at the graduate and postgraduate studies at the Faculty of Geodesy studied Croatian cartographers within the scope of their seminar papers, diploma and master theses and dissertations. Biographical lexicon Hrvatski kartografi (Croatian Cartographers) was published after 14 years of collecting data (Lapaine and Kljačić 2009: 9-10).

According to the definition, which was given by the authors of this lexicon, Croatian cartographers are Croatian or people of Croatian origin who have lived all over the world and worked in the field of cartography. Members of other nations and nationalities who were born in Croatia, regardless of where they lived, and foreigners who lived and worked in Croatia, contributing to the cartography are also considered as Croatian cartographers.

As Hungarian cartographers we considered those cartographers who were born in Hungary or attended school there, but all of them were engaged in cartography in some way. Below is a list of cartographers who are, at the same time, important for Croatia and Hungary, and were elaborated in the biographical lexicon Hrvatski kartografi (Croatian Cartographers): Nicolo (Nicolaus) Angielini (Angielus), Franz Xaver Richter von Binnenthal, F. X. Blumen, Gabriel Bodenehr, Mirko Daniel (Daniel Emeric) Bogdanić, Jozef Broditzky, Georg Collimitius (Tanstetter), Joszef (Josip) Erdödy, Antal (Antun, Anton) Fasching, John Gottwald, Franz Ritter von Hauer, Augustin Hirschvogel, Gabriel Homer, Mihály (Michel, Michael) Lajos (Louis, Lewis, Ludwig von) Jeney (Jenney, Jenny), Ferenc (Franjo) Karacs (Karač), Matija Petar Katančić, Lazarus (Lázár, Eleazarus, Lazarus Secretarius), Wolfgang Lazius, Johannes (Johann) Ledentu, Joseph Marx von Lichtenstern, Johann (Johannes, Ivannis) Lipszky von Szedlicsna, Johann von Marek, Giucomo Marieni, Luigi Ferdinando Marsigli, Pierre (Pieter) Mortier, Johann Christoph Müller, Xaver Muller, Andreas von Neu, Franciscus Pázmándy, Josef Scheeda, Samuel Sebesteny, Johannes Stabius (Stab), Karl Heinrich Hektor Guido Stache, Anton Steinhauser, Martin Stier, Georg Matheus Vischer, Johan Würth.

2. ABOUT HUNGARIAN AND CROATIAN CARTOGRAPHERS

The following text includes biographies of Hungarian cartographers who are also Croatian cartographers, and who are less known by our estimation. Besides them, there are also a certain number of people considered as Croatian and Hungarian cartographers but due to the inability to resume their work and show in this paper, we refer all interested readers to the lexicon Hrvatski kartografi (Croatian cartographers). The cartographers and their biographies that follow are given in chronological order.
Johannes (Johann) Ledentu was a court painter and engineer. The Collection of Codexes and Incunabula of the National Library in Vienna keeps two Volumes (codexes) containing a series of views of cities and fortress at the Hungarian-Slavonian border. Among them views of Klenovnik, Varaždin, Čakovec, Legrad, Koprivnica, Zagreb, Komárom etc., were produced by him. He is considered a Hungarian and Croatian cartographer because he created views of cities and fortress at the Hungarian-Slavonian border.


Andreas von Neu was a baron, brigadier general and cartographer (Vienna, 1731 – Vienna, 1803). He was a director of the General headquarters officers at the War Ministry in Vienna. He led the survey of Czech, Moravia, Silesia, Upper and Lower Austria, Innviertel, Galicia and Hungary. He also led the cadastral survey in Hungary, Transylvania, Croatia and Slavonia. He is considered a Hungarian and Croatian cartographer because he led the survey of Hungary and cadastral survey in Hungary, Croatia and Slavonia. (Regele 1955: 65, Scott 2003: 315, Tooley 1979: 462, Tunjić 1996: 64-65, Tunjić et al 1997: 137).

F. X. Blumen was a surveyor and engineer from the second half of the 18th century. He is one of the most important Vukovar landownership surveyors. His origins are from Pecs. The map of Eltz property, which was made not earlier then 1755, and the maps of villages Bobota and Vera, which was made not earlier then 1758, are saved. Later on many surveyors used his maps as a basis for drawing new maps. He made a plan of village Korod which is held in the State Archives in Osijek. The cadastral map of Osijek’s Lower Town from 1759 is kept in the Museum of Slavonia in Osijek. This map is the oldest known cadastral plan of that town and it is also significant because it is oriented towards the north, unlike most plans from the first half of the 18th century, which are oriented towards the south. He is considered a Croatian cartographer because he made the maps of Eltz property, villages Bobota and Vera, etc., which belong to the Croatian territory. He is considered a Hungarian cartographer because his origins are from Pesc.


Gabriel Homer was a surveyor. He died in New Vukovar on April 15, 1836. He was a surveyor of the Kingdom of Hungary and of the Vukovar landownership. It is assumed that he came from Austria and stayed in Vukovar. He made a series of 37 maps (29 maps of all Vukovar landownership settlements, 4 maps of wildernesses, 2 general maps and 2 maps of landownership forests). The whole series were done in the same manner. Terrain features are shown and important objects are labeled, along with an explanation. He was an excellent draftsman. He decorated his maps with various drawings, some even with verses. He has worked with Franciscus Pázmándy and used some Blumen’s maps as the basis for his work. In the State Archives in Osijek are kept his maps: villages Bogdanovci, Ilača, Novak, Novi Banovci (Fig. 2), Tovarnik, property Grabovo (Fig. 1), plan of Lake Palača, river Vuka, channels Krive Bare and Antin. In 1823 he made a copy of the cadastral map of Osijek’s Upper Town (original was created by Josip Reillich and Petrus Simits in 1786). The manuscript copy is kept in the Museum of Slavonia in Osijek. He is considered a Croatian cartographer because he made many maps of Croatian territory. The reason why we took him as a Hungarian cartographer is his work as a surveyor of the Kingdom of Hungary.


Fig. 1 Gabriel Homer, a map of Grabovo, from 1790 (State Archives in Osijek)
Franciscus Pázmándy was a surveyor of Vukovar landownership and of the Kingdom of Hungary. In 1880’s he completed a new survey of the landownership and reported on the work at the landownership administration meeting in Vukovar in 1790. He worked together with Samuel Sebesteny and Gabriel Homer. He made the maps of town Sotin (Fig. 3), villages Stari Jankovici, Čakovci and Berak. The maps are kept in the State Archives in Osijek. His maps of villages Ilača, Mikluševci, Opatovac, Tompojevci and property Belec have been also preserved. He is considered a Hungarian and Croatian cartographer because he was a surveyor of Vukovar
landownership and of the Kingdom of Hungary. As a Croatian cartographer he also made the maps of Croatian villages, town Sotin and property Belec.  


![Fig. 3 Franciscus Pázmándy, a map of Sotin, from 1793 (State Archives in Osijek)](image)

**Samuel Sebesteny** was a surveyor and engineer in the 18th century. He was a surveyor of the Kingdom of Hungary and of Vukovar landownership. He worked together with Franciscus Pázmándy and Gabriel Homer. He created the draft of town Šarengrad which is kept in the National Archives in Osijek. He made a map of villages Novak, Opatovac and Tovarnik.  


**Johan Würth** was a surveyor at the end of the 18th century. He was a surveyor of the Syrmia County and licensed surveyor of the Kingdom of Hungary. He made the map of villages Tovarnik and Novi Banovci, and marsh Palača.  


**Matija Petar Katančić** was a Franciscan, poet, literary theorist, translator, lexicographer, historian, archaeologist, numismatist, geographer and cartographer (Valpovo, August 12, 1750 – Budim, May 23, 1825). He worked as a school teacher in Osijek and Zagreb. From 1795 to 1800, when he retired, he taught Archaeology and Numismatics at the University of Budapest.  

In 1778 he translated the work of Pál Makó de-Kerek Gede: *Elementa Geometriae Practicae*. The title of the translation is *Pridhodna Bilixenja od Dillorednog Zemljomirja*. The translation has never been completed. This translation is the oldest geodetic textbook in Croatian. In 1781 he began the systematic archaeological research in the field. He went on the foot around the Roman limes, explored the coast of the Danube to Zemun and drew geographical maps. He created the first reconstruction of a plan of Mursa in 1782 - location, size, shape, indicating the direction of the Roman road, and marked the position of a Roman bridge. Reconstruction work was published
in *Dissertatio de columna milliaria od Eszekum reperta*. In Osijek from February to September 1785 he made a series of multicolored copies of geographical maps: Panonija, Syrmia, Bačka, Baranja and others. In February 1787 his manuscript of a book *Systema geographie* was returned to him because it was not approved for school use. In August 1790 he searched the countryside Šćitarjevo and Sisak and drew topographic maps. In 1803 and 1805 he prepared works of a great scientific value which were printed later as *Orbis antiques ex tabula itineraria* (1-2, 1824–1825) and *Istri adcolarum geographia vetus* (1-2, 1826–1827). In the period from 1804 to 1817 he completed, in the manuscripts preserved, the ancient geographical comments of historians Pliny, Ptolemy, Herodotus, Strabo, Homer and Moses. Until 1809 he resided in the Franciscan Monastery of St. Mary Province in Pest, then in the central monastery of St. Ivan Kapistran Province in Budim. He did not leave the monastery or act in public until the end of his life.

**WORKS (choice):**
- Pridhodna Bilixenja od Dillorednog Zemljomirja, manuscript. 1778.
- *Dissertatio de columna milliaria od Eszekum reperta*. Osijek 1782.
- *Systema geographie*, manuscript. 1787.

**Joszef (Josip) Erdödy** (1754 – 1824). Erdödy was a noble family with possessions in Hungary and Croatia. They came from the Hungarian ancestry Bakacs. A founder of the family Erdödy was Petar I. He was mentioned for the first time in 1489 when King Matija Korvin confirmed to his family aristocratic sheet and coat of arms from 1459. The central archive of the family has been stored in the Central State Archives of Slovakia in Bratislava. A part of the archive is in the National Archives of Hungary in Budapest, and the part of archive is in the Croatian State Archives and the Archives of the Croatian Academy of Sciences and Arts in Zagreb.

Joszef (Josip) Erdödy was a high ranked officer in the region Nyitra, a chancellor of the Hungarian Office and the great district-perfect of Hungarian districts Hont (from 1779) and Nyitra (from 1810) and district of Požega from 1790 to 1797. He was a knight of the Order of the Golden Fleece (from 1808), a master of the royal superintendents and the chancellor of the Order of St. Stephen. He managed the common administration of family properties in Croatia. The Metropolitana Library in Zagreb keeps two of his maps, a military topographic map *Nyitra Varmegye* and a military-political map *Hungaria et Transilvania-Magyar Orszagnak*. He produced a plan of Varaždin and copied a plan of Varaždin fortress borders produced by J. Voetter.

**WORKS:**

**Franz Xaver Richter von Binnenthal** (Vienna, 1759 – Linz, 1840) was a cartographer. He was employed as a cartographer at the Timisoara border Banat (*Temesvarer Banatgrenze*) 1781, 1784 mapping cadet, sergeant (*Fähnrich*) 1785, captain 1789, major 1797, lieutenant colonel 1799. During the period when he was a director, it was conducted military triangulation of many regions and parts of the regions. Among other regions, 1808 were conducted parts of Lower Austria, Salzburg, Styria, Carniola, Czech, Moravia, Silesia, Hungary, Croatia, and 1810 parts of Lower Austria, Upper Austria, Styria, Czech, Moravia, Hungary, Croatia. In late 1811 the triangulation for the majority of Lower and Upper Austria, Salzburg, Styria, Eastern Carniola, Czech, Moravia, Silesia, the narrow area of Hungary along Lower Austria - Moravian border and the narrow area between the lines from Pressburg (south) – Schemnitz and Kaschau to Porlo on the north and from Ödenburg-Raab-Gran-Ofen-Miskolcz to Nagyhegy on the south, areas in Croatia between Zagreb and the border of Styria were made (Nischer 1925:149-151, Tunjić et al 1997: 133).

**Ferenc (Franjo) Karacs** (Karač) was a copperplate engraver and cartographer (1771–1838). He studied at Debrecen, Pest and Vienna and learned his engraving technique at the workshops of Junker and Czetter. Karacs worked mainly in Pest where he was the first to set up a printing press
capable of the production of the large-size map sheets from copperplate engravings. He made a map of Hungary and neighboring countries. In 1882 Josip Szeman and Franjo Karač created a copperplate map of Zagreb Diocese. Commissioned by Bishop Maksimilijan Vrhovec, Szeman created this map. Szeman chose Franjo Karač, one of the best copperplate engravers and cartographers in Hungary at that time, to do the engraving and the graphic design of the map. The map shows the territory of Zagreb Diocese and its division into parishes with their respective villages. A third sheet of the map is interesting in showing a quite large view of Zagreb. In the first half of the 19th century Franjo Karač created a map of Bosnian or Đakovo-Syrmia Diocese with their associated parishes. The map is preserved in the Museum of Slavonia in Osijek.


**Jozef Broditzky** and **John Gottwald** made the *Postal and railway map of Austro-Hungarian Monarchy* at the scale of 1:576 000. This map was made at the end of the 19th century and shows routes and stations. The original is kept at the State Archives in Bjelovar. (Župan 1999: 13, 15)

**Franz Ritter von Hauer** was a geologist and geographer (Vienna, January 30, 1822 – March 20, 1899). He is considered to be a founder of geology in Austria. He was educated in Vienna, and later studied geology at the Mining and Forestry Academy in Schemnitz from 1839 to 1843. Once he was involved in mining operations in Styria. From 1844 he worked in the Mining Museum in Vienna. In the Mineralogical Department of this museum he became an assistant to Wilhelm von Haidinger in 1846. Three years later he joined the Imperial Geological Institute, and in 1866 was elected Director of the Institute. On that position he spent 19 years. From 1886 to 1896 he was Director of the Natural History Museum in Vienna. From 1892 he was a lifelong member of the Austrian Parliament. He was the most interested in geology and paleontology of the Austro-Hungarian Empire. Among his specialized geological works are those about *Cephalopods* in the Triassic and Jurassic formations of the Alpine region 1855-56 and Bosnia. Besides of that he published many papers on mineralogy and applied geology. His most important work is the creation of geological map of Austria-Hungary, on 12 sheets (1867-71) and fourth release from 1884 includes Bosnia and Montenegro. The interpreters, who were considered as "models of concise descriptions" and "the best guides that exist for one of the most interesting parts of Central and Eastern Europe", were made together with this map. He wrote a series of meetings reports on the Imperial Geological Institute in which are covered parts of Croatia. In 1882 Geological Society of London awarded him with the Wollaston Medal. He is considered a Hungarian and Croatian cartographer because his geological map of Austria-Hungary covers parts of Croatia and Hungary. He is also important for Croatia because he wrote a series of meetings reports in which are covered parts of Croatia.

Karl Heinrich Hektor Guido Stache was a geologist and paleontologist (Namysłów, Silesia, March 28, 1833 – Vienna, April 11, 1921). After finished high school in Wroclaw, he studied natural sciences in Wroclaw and Berlin from 1851 to 1855. In 1857 he joined the Imperial Geological Institute in Vienna. He is considered as one of the last Monarchy pioneers of systematic geological survey. He led the geological recording of Carniola and Istria from 1857 to 1859, Transylvania 1860, northern Dalmatia 1861, Bakonjska forest and area of Lake Balaton 1862, other parts of Hungary and Galicia from 1863 to 1870. After that, he explored the Alps and the coastal area and Dalmatia. In 1870 he visited Tunis and Gabes. He gave a great contribution to the scientific study of geology and paleontology of coastal parts of the Austro-Hungarian Empire and eruptive rocks of the eastern Alps. His fields studies of karst areas of the former Austrian littoral gave a great contribution to understanding the phenomenon of karst. Results were published in 1864. About geological structure of Istria he wrote about thirty papers (discussions, articles, interpreters and text associated to the geological map) and about forty papers related to the Croatian area. At the same time he thoroughly studied biostratigraphic relationships of Neogene sediments in Lower Carniola, and gave special attention to the labeling of fossils samples from the field. In 1860 he worked with F. von Hauer on extensive field research of Transylvania which resulted in publishing of a review geological map in 1861. The results of the research were published in 1863. Within these works, for a one group of quartz andesite, Hauer and Stache introduced a new term Dacit. Nowadays in the petrographic nomenclature this group is known according to the term Dacit. After the Alpine field research, Stache published an overview of the Paleozoic formations of the Eastern Alps, geologically the most complex Austrian alpine region. This was the basis for further research into the issue. Among his major achievements are the paleontological studies of fossils in Liburnian sediments and producing a series of sheets of geological map of the Austro-Hungarian Empire at a scale of 1:75 000. He was an honour member of the Hungarian Geological Society and a senior mining consultant. Because of his wide knowledge and great practical experience in geological investigations, in 1885 he was elected Vice-President, and in 1892 President of the Imperial Geological Institute. In that position he was until his retirement in 1902. He is considered a Hungarian and Croatian cartographer because he led the geological recording of Carniola and Istria, Dalmatia, area of Lake Balaton and other parts of Hungary. He is also important because he created a series of sheets of geological map of the Austro-Hungarian Empire.


Xaver Muller. In the 19th century he made a hydrological map at the scale of 1: 750 000 titled General Karte woraus ersichtlich wie die Koenig provilegirte Ungar. Schiffartsgellschaft mittelest 4 Kanaelen und Schibarmachung, der dazwischen ligenden Flusse die Ausfuhr aus dem Koenigreiche Ungarn zum adriatischen Meere erleichteren und befoerdern will. The map is kept in the Croatian State Archives in Zagreb. He is considered a Hungarian and Croatian cartographer because this map contains the territory of Hungary and Croatia.

Antal (Antun, Anton) Fasching (Fig. 4) was a geodesist (Timisoara, June 6, 1879 – Budapest, October 12, 1931). He graduated at the Technical University of Budapest in 1902, where he received his doctoral degree in 1906 as the first Doctor of Geodesy in Hungary. From 1902 he worked as an assistant, then as a higher lecturer, assistant professor, triangulation engineer, supervising engineer, state survey inspector, adviser to a minister, and senior associate of the Hungarian State Cartography. During the First World War, with the rank of the captain first class, he worked for two years in the Military Geographic Institute in Vienna, where he took part in the organization of military surveys. He also took part in the management and carrying out of triangulation and cartographic works in Romania and Bukovina. Accepting an invitation from the High Technical School in Zagreb, as professor on contract from 1923 to 1927, he taught Higher Geodesy, State Survey, Photogrammetry and Cartography.

Fig. 4 Bust of Antal Fasching, in Budapest
His contribution to the work of the Commission for the Selection of Map Projection for the region of Yugoslavia is particularly important. At the end of 1927, he returned to Budapest and worked at the State office for Triangulation and in the State Cartography Department. He published about twenty monographs and more than 40 papers in Hungarian, German, French and Croatian journals and received several Hungarian awards and medals for his writings.

WORKS (choice):


3. INSTEAD OF CONCLUSION

The biographical lexicon Hrvatski kartografi (Croatian cartographers) does not have recorded living Croatian cartographers who are also Hungarian cartographers. Regardless of, nowadays the cooperation exists between these two countries.

One example of this cooperation is Dubravka Mlinarić, PhD, a historian and geographer. She got a scholarship and was able to attend Postgraduate studies in history at the Department of History of the Central European University – CEU in Budapest. In 1997 she received Master's degree by defending her Master’s thesis The 17th Century Cartographic Representation of the Territories of the Kingdom(s) of Dalmatia, Croatia and Slavonia in Central European and Mediterranean Context (Lapaine and Kljajić 2009: 401).
In 2004 in the *Cartography and Geoinformation* journal an article about Johann Christoph Müller was published. This article was a product of collaboration between Dr. Antal András Deák, Prof. Miljenko Lapaine, PhD and Assist. Prof. Ivka Kljajić, PhD. Johann Christoph Müller is one of the most significant cartographers of the first half of the 18th century. His work is of special importance for cartography of Hungary, Croatia, Austria and other Danube basin countries (Deák et al 2004: 68). Antal András Deák is a Hungarian historian and cartographer. He is a scientific collaborator at the Danube Museum (Duna Múzeum) in Esztergom who published a four-language publication (Hungarian, Italian, German and English) on a CD. The publication contains manuscript maps produced by Luigi Ferdinando Marsigli and Johann Christoph Müller. At the end of the Preface, Deák thanked everyone who helped him to produce this publication, among which there are two people from Zagreb, Prof. Miljenko Lapaine, PhD and Mirela Slukan-Altić, PhD (Kljajić 2007: 82).

The result of the Hungarian-Croatian project *Oldest Croatian Geodetic Textbook* was a book *Elementa Geometriae Practicae – Zemlyomirje Introduction to Practical Geometry/Surveying*, which was published in 2010. The editors were Miljenko Lapaine, from Croatia, and Dušan Marjanović, from Hungary. The book deals with the oldest Croatian geodetic textbook written by Matija Petar Katanić. This book is a translation of a book in Latin of Hungarian Pál Makó de Kerek Gede.

In November 2010 in Zagreb, an international exhibition *Tragač za zvijezdama* (The Star Seeker) took place on the occasion of the 250th anniversary of birth of Danijel Mirko Bogdanić and 200th anniversary of completion of Lipszky map of Hungary.

In September 2011 in Split, the 3rd Croatian NSDI and INSPIRE Day and 7th Cartography and Geoinformation Conference were organized. During this conference, the Agreement on the Exchange of Cartographic Materials between the Institute of Geodesy, Cartography and Remote Sensing of Hungary and the State Geodetic Administration of Croatia was signed by Željko Bačić, General Director of the State Geodetic Administration and Bence Torony, General Director of the Institute of Geodesy, Cartography and Remote Sensing of Hungary.

In the beginning of 2012 Jeney János, from Eötvös Loránd University in Budapest, gave the lecture at the Faculty of Geodesy in Zagreb. The lecture was about creating a web database of Hungarian population on maps.

Béla Szalai wrote three-volume monograph *Magyar várak, várasok, falvak metszeteken 1515-1800*, published in Budapest in 2006 and available only in the Hungarian language. In the journal *Cartography and Geoinformation* is in the process publishing a study which is an adapted chapter from Béla Szalai's monograph.

Géza Pálffy is a senior research collaborator of the Institute for the History of the Hungarian Academy of Sciences and Arts in Budapest. His research area is related to the history of the Hungarian-Croatian Kingdom and the Habsburg Monarchy for the period of the 16th to 18th century. He is an author of 20 books and over 170 articles. The book *Povijest Madarske, Ugarska na granici dvaju imperija (1526.-1711.)* is published in Croatian in 2010. He also published several articles in Croatian journals. In a bilingual (Hungarian-German) book he described cartographic activities of a family Angieli on the Croatian-Slavonian and Hungarian borders from 1560 to 1570. The book was published with a CD in 2011. A book review will be published in the journal *Cartography and Geoinformation*. He is an editor of Croatian journals (*Podravina: Časopis za multidisciplinarnu istraživanja, Radovi Zavoda za hrvatsku povijest i Zbornik Odsjeka za povijesne znanosti HAZU*).

The work of collecting data of Croatian cartographers has not finished with publishing the biographical lexicon *Hrvatski kartografi* (Croatian Cartographers). Everyday collaboration gives new cartographers and contributes to creating closer ties between these two countries.
4. REFERENCES

Gutzmirtl R (1998b) Hrvatski kartografi u istočnoj Slavoniji. Thesis, University of Zagreb, Faculty of Geodesy
Gutzmirtl R (1998b) Kartografija i kartografi u Muzeju Slavonije u Osijeku. Seminar paper, University of Zagreb, Faculty of Geodesy, Zagreb
Heka L (2011) Osam stoljeća hrvatsko-ugarske državne zajednice s posebnim osvatom na Hrvatsko-ugarsku nagodbu. Bába Kiadó, Szeged-Subotica
Kostrenčić M Protega M (eds 1966) Opća enciklopedija. Vol 4, Lexicographic Institute, Zagreb
Kruhek M (1986) Tvrdava u Koprivnici - povijesni i tipološki razvoj. Koprivnica - grad i spomenici. University of Zagreb, Department of Art History of the Center for Historical Research, Zagreb, 28
Nischer E (1925) Österreichische Kartographen. Österreichischer Bundesverlag, Wien
Regele O (1955) Beiträge zur Geschichte der staatlichen Landesaufnahme und Kartographie in Österreich bis zum Jahre 1918. Wien
Rezo M (1999) Kartografija i kartografi u Varaždinu. Seminar paper, University of Zagreb, Faculty of Geodesy
Šljivarić M (1998) Kartografija i kartografi u Metropolitanskoj biblioteci u Zagrebu. Seminar paper, University of Zagreb, Faculty of Geodesy
Tunjić I (1996) Povijest kartografije u Austriji do 1918. Thesis, University of Zagreb, Faculty of Geodesy
Tunjić I (1998) Antal Fasching. Seminar paper, University of Zagreb, Faculty of Geodesy
Župan R (1999) Kartografija i kartografi u trokutu Bjelovar, Križevci, Koprivnica. Seminar paper, University of Zagreb, Faculty of Geodesy
*** (1932) Fasching Antal. Térképészeti Közlöny 1(4): 1

5. A BIOGRAPHY OF THE PRESENTING AUTHOR

Marina Rajaković is a geodesist and cartographer. She graduated at the Faculty of Geodesy in Zagreb in 2009. In a private company Geodist d.o.o. she worked in the field of the cadaster from July 2009 to July 2011. She has been working at the Faculty of Geodesy in Zagreb as a scientific novice and assistant since July 2011. In the same year she enrolled the postgraduate doctoral studies of geodesy and geoinformatics. She is a collaborator at the scientific project Cartography of the Adriatic. During her studies, in 2007 she was awarded the Dean’s Award for the student paper titled Konusne projekcije za Hrvatsku (Conical Projections for Croatia). Next year, she was awarded the second Dean’s Award for the student paper titled Najbolja konformna konusna projekcija za Hrvatsku (The Best Conical Conformal Map Projection for Croatia). In 2009 she was awarded Faculty Award as a best student of the 5th year.