

## Anatoly V. MIRONOV

(Curriculum Vitae)

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### EDUCATION:

**Master Degree in Computer Science**, Polytechnic Institute of Yerevan, USSR, **1976**

**Board Operator**, Educational-Training School of the Civil Aviation, Leningrad, USSR, **1986**

**Mountain Rescuer**, Mountain Rescue School, Caucasus, USSR, **1984**

### WORK EXPERIENCE:

#### **2001-present**

*Research Engineering/Scientist Associate II – Research Scientist Associate III  
Institute for Geophysics, John A. and Katherine G. Jackson School of Geosciences, The University of Texas at Austin, TX, USA*

- **Collaborative U.S.-Chinese project that involved the seismic imaging of Taiwan's continent-collision zone**  
Upgrading Ocean Bottom Seismographs (OBS) for the National Taiwan Ocean University, 2007
- **Grounding line forensics: The history of grounding line retreat in the Kamb Ice Stream outlet region**  
Field preparation of the ground based radars (wideband preamplifier design and development, testing, etc.); technical support in the 2006/2007 austral summer field season; radar and GPS data collection; rescue support
- **HLY0602: Integrated Geophysical and Geologic Investigation of the Crustal Structure of Western Canada Basin, Chukchi Borderland and Mendeleev Ridge, Arctic Ocean**  
Field preparation of the sea ice seismic equipment based on REF TEK-130 High Resolution Seismic Recorders; technical support in the field (July-August 2006); deployment and recovery of the instruments; seismic data collection (helicopter board operator)
- **Seismic refraction study in West-Africa (Cameroon-Nigeria), GXT/UTIG Refraction Survey**  
Field preparation of the OBS's (upgrading, testing, repairing, etc.); technical support in the field (January 2006)
- **AGASEA: Airborne geophysical survey of the Amundsen Sea Embayment**  
Field preparation of the airborne geophysics equipment (radars, gravimeter, magnetometer, laser, GPS, etc.); equipment setup onboard of the aircraft; technical

- support in the 2004/2005 austral summer field season; airborne geophysical data collection (aircraft board operator); shallow ground-penetration radar and firn core data collection and processing
- **Correlation of Seismic Structure with Observed Outcrop Geology: MCS/OBS Investigation of Hess Deep and Blanco Transform**  
Field preparation of the OBS's (upgrading, testing, repairing, etc.), 2004
  - **ONSET: Characterizing the Onset of Ice Stream Flow Project**  
Field preparation of the deep ground and shallow ground-penetration radar (upgrading, testing, repairing, etc.); technical support in the 2001/2002 and 2002/2003 austral summer field seasons; participation in seismic survey; radar, seismic and GPS data collection; radar and firn core data processing
  - **ATRS: Advanced Technology for Radar Sounding of Polar Ice**  
Field preparation of the airborne geophysics equipment (radars, laser, GPS, etc.); equipment setup onboard of the aircraft; technical support in the 2001/2002 austral summer field season; airborne geophysical data collection (aircraft board operator)

### **1998-2001**

*Project Technical Leader*

*Polar Marine Geological Research Expedition (PMGRE), Saint Petersburg, Russia*

- **Antarctic Research and Investigation Subprogram (Lake Vostok study)**  
Equipment development, upgrading, testing, repairing, etc.; ground based radar data collection; radar data processing
- **Airborne geophysical Investigation of the Russian Arctic Shelf**  
Equipment development, upgrading, testing, repairing, etc.; equipment setup onboard of the aircraft; airborne geophysical data collection (aircraft board operator); radar data processing

### **1997-1998**

*Technical Manager*

*Agency VICAAR, Saint Petersburg, Russia*

Development of the Digital Radar System for radar sounding of Antarctic and Arctic glaciers

### **1991-1997**

*Owner and manager of the joint-stock companies, Saint Petersburg, Russia*

Commercial activity

### **1985-1991**

*Senior Geophysicist – Project Technical Leader*

*Production-Geological Association “Sevmorgeologiya”, All-Union Research Institute of Geology and Mineral Resources of the World Ocean (VNII Okeangeologiya), PMGRE, Leningrad, USSR*

Development and utilization of airborne geophysical laboratories onboard IL-18 and An-74 aircrafts for complex geophysical surveys of Antarctica and the Arctic; equipment development, technical support, data collection (aircraft board operator), data processing

**1983-1985***Technical Manager**Production-Technical Enterprise of Leningrad, Leningrad, USSR*

Development of a computerized system for pre-processing satellites' data

**1981-1983***Project Technical Leader**Research-Production Association "Leninec", Leningrad, USSR*

Development of a computerized aircraft control system

**1980-1981***Author and Developer**Research Technological Institute of Microelectronics, Yerevan, USSR*

Development of a computerized system for astrophysical research of stars radiation intensity (for the Byurakan Astrophysical Observatory, Armenia, USSR)

**1976-1980***Digital Electronics Engineer – Project Technical Leader**Research Technological Institute of Microelectronics, Yerevan, USSR*

Development of several Automatic Measuring Systems for integrated circuits time parameters verification

**FIELD EXPERIENCE:**

- **U.S. Antarctic Program (USAP) 2006/2007 (Siple Dome, Kamb Ice Stream, Whillans Ice Stream, Mercer Ice Stream field camps, West Antarctica)**  
Ground radar survey, GPS measurements
- **USCGC Healy Cruise (HLY-0602, Arctic Ocean), July-August 2006**  
Seismic refraction survey
- **GXT/UTIG Refraction Survey Cruise (Bin Hai-512, Douala, Cameroon, West-Africa), January 2006**  
Seismic refraction study
- **U.S. Antarctic Program (USAP) 2004/2005 (Thwaites field camp, West Antarctica)**  
Airborne geophysics
- **U.S. Antarctic Program (USAP) 2002/2003 (Onset D field camp, West Antarctica)**  
Shallow ground-penetrating radar survey, seismic experiment
- **USAP 2001/2002 (McMurdo station, Amundsen-Scott South Pole station, Onset D field camp, West Antarctica)**  
Airborne geophysics and deep ground radar soundings
- **Arctic expeditions during 1999 and 2000 seasons**  
Airborne geophysics in Russian Arctic
- **44<sup>th</sup> (1998/1999), 45<sup>th</sup> (1999/2000), 46<sup>th</sup> (2000/2001) Russian Antarctic Expeditions (Vostok station, East Antarctica)**  
Deep ground radar sounding of Lake Vostok region

- **33<sup>rd</sup> (1987/1988), 34<sup>th</sup> (1988/1989) Soviet Antarctic Expeditions (Molodeznaya station, Vechernyaya field base, East Antarctica)**  
Airborne geophysics in East Antarctica
- **Several Arctic expeditions during 1986-1989 field seasons**  
Airborne geophysics in Russian Arctic

### **CLIMBING EXPERIENCE:**

<b>MOUNTAIN</b>	<b>ROUTE</b>	<b>m/feet</b>	<b>REGION</b>	<b>YEAR</b>
Tashkentec	W ridge	3875/12713	Pamir, Fanskies mountains	1985
Sakharnaya Golova (Sugar Head)	NE ridge	4910/16109	Pamir, Fanskies mountains	1983
Sakharnaya Golova (Sugar Head)	S face	4910/16109	Pamir, Fanskies mountains	1983
Sakharnaya Golova (Sugar Head)	SE ridge	4910/16109	Pamir, Fanskies mountains	1983
Skal'naya Stena	from Double pass	4734/15531	Pamir, Fanskies mountains	1983
Blok	E ridge	4500/14764	Pamir, Fanskies mountains	1983
Dutandon	NE ridge	4300/14108	Pamir, Fanskies mountains	1983
Arg	E ridge	4200/13780	Pamir, Fanskies mountains	1983
Belyi Bars	S ridge	4505/14780	Pamir, Fanskies mountains	1983
Alloro	N face	4050/13287	Pamir, Fanskies mountains	1983
Fytnargin	SE face	4123/13526	Caucasus, Ailama region	1981
Zeskho	S ridge	3792/12441	Caucasus, Ailama region	1981
Vakhushti	SE ridge	4000/13123	Caucasus, Ailama region	1981
MNR peak	SW-NE traverse	3830/12566	Caucasus, Mt.Elbrus region	1980
MNR peak, SW summit	E ridge	3810/12500	Caucasus, Mt.Elbrus region	1980
Irikchat	W-E traverse	4030/13222	Caucasus, Mt.Elbrus region	1980
Via-Tau	S ridge	3820/12533	Caucasus, Mt.Elbrus region	1980
Suaryk, W summit	W ridge	3940/12927	Caucasus, Mt.Elbrus region	1979
Irikchat	E-W traverse	4030/13222	Caucasus, Mt.Elbrus region	1979
Shkhelda Malaya	E ridge	4140/13583	Caucasus, Mt.Elbrus region	1979
Marjanishvili	E ridge	3850/12631	Caucasus, Ailama region	1978
Ninoshvili	N face	4054/13300	Caucasus, Ailama region	1978
Aragac	E-N traverse	4096/13438	Caucasus, Armenia	1978

### **PROFESSIONAL SOCIETIES:**

Member of Russian Geographic Society, since **1983**

### **AWARDS:**

Antarctica Service Medal of the United State of America, **2005**

Antarctica Service Sign of the Russian Federation, **1998**

Antarctica Service Sign of the USSR, **1987**

## **PUBLICATIONS:**

Vermeesch, P.M., Van Avendonk, H.J.A., Lawver, L.A., Hornbach, M.J., Wiederspahn, M., Saustrop, S., **Mironov, A.V.**, Stevenowski, S., Asher, C., Bain, K., McDonald, M. and Young, R., 2006, "Acquisition of long-offset seismic refraction data in the Chukchi Borderlands and Mendeleev Ridge", The poster presented at the AGU Fall Meeting, San Francisco, CA, December 11-15

Peters, L.E., Winberry, J.P., Anandakrishnan, S., Voigt, D.E., Smith, A.M., Greschke, B., **Mironov, A.V.**, Braddock, P., Morton, A., Nolan, M., 2003, "Imaging Subglacial Sediments in the Onset Regions of the Ross Ice Streams: Inferences on how Subglacial Geology Affects Ice Stream Initiation and Flow", The poster presented at the 10<sup>th</sup> Annual WAIS workshop, Algonkian Meeting Center in Sterling, Virginia, September 17-20

Popov, S.V., Sheremetiev, A.N., Masolov, V.N., Lukin, V.V., **Mironov, A.V.**, Luchininov, V.S., 2003, "Velocity of radio-wave propagation in ice at Vostok station, Antarctica", Journal of Glaciology, Vol. 49, No. 165: p.p. 179-183

Morse, D.L., Blankenship, D.D., **Mironov, A.V.**, King, E.C., Anandakrishnan, S., Smith, A.M., Alley, R.B., 2002, "Geophysical Investigations at the onset of ice Stream D, West Antarctica", The poster presented at the International Symposium on Fast Glacier Flow in Yakutat, Alaska, June 10-14

Popov, S.V., **Mironov, A.V.**, Sheremetiev, A.N., Luchininov, V.S., 2001, "Measurement of the average velocity of propagation of electromagnetic waves in the ice sheet in the vicinity of Vostok Station", MGI (Data of glaciological studies), Moscow, Vol. 90: p.p. 206-208

Filina, I.Yu., **Mironov, A.V.**, Popov, S.V., 2000, "Digital registration of radio echo sounding data and preliminary results of airborne geophysical survey over western part of Franz Josef Land Archipelago", Abstracts of the International Geophysics Conference "300<sup>th</sup> Anniversary of the Geological Survey of Russia", St. Petersburg, Russia, October 2-7

Popov, S.V., **Mironov, A.V.**, Sheremetiev, A.N., 2000, "The results of ground radio echo sounding investigations of subglacial Lake Vostok during 1998-2000", MGI (Data of glaciological studies), Moscow, Vol. 89: p.p. 129-133

Popov, S.V., **Mironov, A.V.**, Sheremetiev, A.N., 2000, "The results of ground radio echo sounding investigations of subglacial Lake Vostok during 44-45 Russian Antarctic Expeditions", Abstracts of XII Glaciological Symposium: p. 31, Pushchino Scientific Center of the Russian Academy of Sciences, Russia, May 15-19

Lukin, V.V., Masolov, V.N., **Mironov, A.V.**, Popkov A.M., Popov, S.V., Sheremetiev, A.N., Verkulich, S.R., Kuzmina, I.N., 2000, "The results of geophysical investigation of

subglacial Lake Vostok (Antarctica) during 1995-1999”, Arctic and Antarctic problems, issue 72: p.p. 237-248

Filina, I.Yu., **Mironov, A.V.**, Popov, S.V., 2000, “Digital registration of radio echo sounding data and preliminary results of airborne geophysical survey over western part of Franz Josef Land Archipelago”, “Geophysical methods of Earth investigations”, the International Conference of young scientist and specialists “Geophysics-99”, Saint Petersburg State University, Petrodvorets, Russia, November 9-12, 1999, Strahov, V.N., Kalvar'skaya, V.P. (Editors), Russian Academy of Sciences, United Institute of Physics of the Earth (UIPE), Moscow, Conference proceedings volume: p.p. 183-187, Moscow

Boyarskiy, V.I., **Mironov, A.V.**, Sheremetiev, A.N., 1998, “Radio echo sounding method in discovering and studying of the water reservoirs under the glaciers”, Abstracts of International Workshop “Lake Vostok Study: Scientific Objectives and Technological Requirements”, Arctic and Antarctic Research Institute (AARI), Saint Petersburg, Russia, March 24-28

Kurinian, E.N., Melkonian, A.S., **Mironov, A.V.**, Oskanian Jr., A.V., Oskanian, V.S., 1980, “The new electronic equipment of the stellar photometer of the Byurakan Astrophysical Observatory”, The messages of the Byurakan Astrophysical Observatory, Vol. LIV: p.p. 65-71