

**APPROVED BY**  
**JINR Vice Director**

\_\_\_\_\_  
“ \_\_\_\_\_ ” \_\_\_\_\_ 2019

**SCIENTIFIC AND TECHNICAL JUSTIFICATION FOR OPENING A NEW THEME**  
**to be included in the**  
**TOPICAL PLAN FOR JINR RESEARCH FOR 2019–2023**

**Theme code** \_\_\_\_\_ **Laboratory** \_\_\_\_\_ **University Centre** \_\_\_\_\_

**Research area** JINR Human Resources Programme

**Theme title** Organisation, Support, and Development of the JINR Human Resources Programme

**Theme leader** V.A.Matveev  
S.Z.Pakuliak

**Abstract**

The theme is aimed at:

- functioning of the Human Resources Development system in the fields of JINR research in order to facilitate the career building for scientific and engineering specialists at the Institute and the research organisations of the JINR Member States;
- creation of appropriate conditions for students and PhD students from Universities of the Member States to enable them to work on their qualification theses;
- support of educational process for students of the JINR-based departments from the universities of the Russian Federation, as well as for the students sent to the UC from the Member States;
- conducting international events including International student practices and international schools for young people from the JINR Member States;
- admission of undergraduate and postgraduate students and trainees on the basis of the cooperation agreements with international organisations and universities from the Member States;
- creation and maintenance of educational laboratory utilities for specialized workshops on accelerator physics and nuclear physics;
- support and improvement of the licensed system of qualification development, professional skills gaining and mastering courses for technical and engineering staff of JINR;

- creation and development of outreach programmes on JINR and modern science achievements for school students and teachers, organisation of excursions to the basic facilities of the Institute;
- design and development of a complex of virtual laboratories allowing students to be trained using modern experimental facilities.

### Results expected upon completion of the theme

Upon completion of the theme, the following results will be achieved:

Conducting lectures and seminars (in accordance with the curricula of universities and the JINR needs for specialists training) for undergraduate and postgraduate students from JINR-based departments of the Russian Federation universities, as well as for undergraduate and postgraduate students sent to the UC by the JINR Member States.

Functioning system of attachment of Institute staff to JINR to enable them to work on their PhD theses without mastering post-graduate academic programmes. Participation in the Institute system of examination of scientific personnel and in the increase of the number of PhD thesis defense procedures.

Coordination of JINR Summer Student Programme, conducting of international schools and workshops for students, organization of international summer student practices for the JINR Member States.

Admission of undergraduate and postgraduate students to JINR on the basis of the cooperation agreements with the Member States universities.

Finalizing of development of the specialized workshop to conduct practical training on accelerator physics and nuclear physics performed on the basis of dedicated test-benches in the framework of functioning of the UC Scientific-Engineering Group established to implement the training programmes for engineering staff for the JINR laboratories and Member States scientific research centres.

Improvement of the licensed system of qualification development, professional skills gaining, and mastering courses for technical and engineering staff of JINR.

Development of a complex of distance-learning courses on the main fields of research at JINR and its facilities. Further development of the system of virtual laboratories allowing for integration of the natural science outcomes into the educational process.

Further development of cooperation with CERN in terms of the implementation of professional development programmes for school teachers from JINR Member States. Creation of the system of virtual visits to the Institute and its basic facilities in order to motivate school students and inspire them to study natural sciences. Support of the Interschool Physics and Mathematics Open Classroom in Dubna, as well as of other educational establishments and natural-science programmes.

### Participants from JINR

Laboratory	№№	Name, Surname	№№	Name, Surname
DNLP		Bednyakov V.A.		Glagolev V.V.
		Naumov D.V.		Olshevskiy A.G.
		Zhemchugov A.S.		Verkheev A.Yu.
BLTP		Kazakov D.I.		Gladyshev A.V.
		Isaev A.P.		Shukrinov Yu.M.
		Arbuzov A.B.		
FLNP		Shvetsov V.N.		Belushkin A.V.

		Culikov O.A.		Kozlenko D.P.
		Lychagin E.V.		Balagurov A.M.
<b>VBLHEP</b>		Kekelidze V.D.		Nikitin V.A.
		Strokovsky E.A.		Panebratsev Yu.A.
		Peshekhonov D.V.		Shimansky S.S.
<b>FLNR</b>		Dmitriev S.N.		Sidorchuk S.I.
		Popeko A.G.		Belogurov S.G.
		Karpov A.V.		
<b>LIT</b>		Korenkov V.V.		Gerdt V.P.
		Strizh T.A.		Pelevanyuk I.S.
		Podgaynyi D.V.		Streltsova O.I.
<b>LRB</b>		Krasavin E.A.		Severyukhin Yu.S.
		Koshlan I.V.		
<b>Directorate</b>		Sharkov B.Yu.		Dudarev A.V.
		Gikal B.N.		Uglov E.D.
<b>SOICO</b>		Sorin A.S.		Chmielowski W.
		Kamanin D.V.		Suschevich A.A.
		Kotova A.A.		

#### Participating countries, institutes, and organisations

<b>Country or Organisation</b>	<b>City</b>	<b>Institute or Laboratory</b>	<b>Participants Name, Surname</b>	<b>Status</b>
Armenia	Yerevan	YSU	Martirosyan R.M. Pogosyan G.S.	Agreement
Azerbaijan	Baku	IP ANAS	Rustamov A.D. Alieva E.	Agreement
Belarus	Minsk	BSU	Ablameyko S.V. Anishchik V.M.	Agreement
		INP BSU	Maksimenko S.A. Fedotova Yu.A.	Agreement
		ISEI BSU	Maskevich S.A. + 3	Collaboration
		ME RB	Karpenko I.V. Bogush V.A.	Collaboration
	Gomel	GSU	Khakhomov S.A. Maksimenko N.V. + 1	Collaboration
		GSTU	Asenchik O.D. + 2	Collaboration
Bulgaria	Sofia	INRNE BAS	Vankov I.	Collaboration
		NRA	Kostov L. Tashev N.	Collaboration
		SU	Boyanov B. Marvakov D. Rainovski G.	Protocol
	Blagoevgrad	SWU	Stamenov J.	Collaboration
CERN	Geneva	CERN	Weiner J. Karjavin V.Yu. Zimin N.I.	
Cuba	Havana	ASC	José Luis Dona	Collaboration
Czech Republic	Prague	CU	Vilguelm I.	Collaboration
		CTU	Shtekl I.	Collaboration
Egypt	Cairo	ASRT	El Samman Kh.	Collaboration
Kazakhstan	Astana	ENU	Sadykov E.B.	Agreement

	Almaty	KazNU	Kadyrzhanov K.K. Aznabaev D.	Agreement
	Ust-Kamenogorsk	EKSU	Mamraev B.B.	Agreement
Moldova	Chisinau	ASM	Ursaki V.V.	Agreement
Mongolia	Ulaanbaatar	IPT MAS	Caanga D. Batgerel B.	Collaboration
Poland	Krakow	NINP PAS	Waligorski M.	Collaboration
	Lodz	UL	Anzheevskij J.	Collaboration
	Poznan	AMU	Navrotsik V. Zavodny R.	Collaboration
Romania	Bucharest	UB	Antokhe S. Popesku D. Greku V.	Collaboration
Russia	Moscow	NRNU MEPhI	Strikhanov M.N.	Agreement
		SINP MSU	Panasyuk M.I.	Agreement
		NRU MPEI	Popov A.I.	Agreement
	Arkhangelsk	NSMU	Gorbatova L.N.	Agreement
		NArFU	Lugovskaya I.R.	Agreement
	Belgorod	BSNRU	Dyatchenko L.Ya.	Contract
	Dolgoprudny	MIPT	Kudryavtsev N.N. Kisilev V.V.	Agreement
	Dubna	DSU	Fursaev D.V. Kuznetsov O.L. Cheremisina E.N. Denikin A.S. Malakhov A.I.	Collaboration
		BSINP MSU	Tetereva T.V.	Collaboration
	Ivanovo	IvSU	Egorov V.N.	Agreement
	Krasnodar	KubSU	Astapov M.V.	Agreement
	Kostroma	KSU	Rassadin N.M. Nikolaev S.N. Popov D.E.	Agreement
	Saint Petersburg	SPbSU	Tunik S.P. Petrosyan L.A. Ovsyannikov D.A.	Agreement Collaboration
	Smolensk	SSU	Kodin E.V.	Contract
	Tomsk	TPU	Nikulina I.E.	Agreement
	Tula	TSU	Gryazev M.V.	Contract
Tver	TvSTU	Tsirulev A.N. Pedko B.B.	Collaboration	
Voronezh	VSU	Endovitskij D.A.	Contract	
Yakutsk	NEFU	Alekseev A.N.	Contract	
Serbia	Belgrade	INS «VINČA»	Petrovich S.	Collaboration
Slovak Republic	Bratislava	CU	Dubnichkova A.	Collaboration
	Kosice	PJSU	Vokal S. Dirner A.	Collaboration
South Africa	Pretoria	DST	Ntombizikhona N.	Collaboration
Ukraine	Kiev	BITP NASU	Zagorodny A.G. Shadura V.N.	Collaboration
		KNU	Skopenko V.V. Bulavin L.A.	Collaboration
USA	Upton, NY	BNL	Wait K.	Collaboration
Vietnam	Hanoi	VAST Inst of Phys	Le Hong Khiem	Collaboration

	Dalat	Dalat University	Trinh Thi Tu Anh	Collaboration
		NRI	Cao Dong Yu	Collaboration

**Time frame of the theme**

01.01.2019 – 31.12.2023

**Total estimated cost of the theme**

№№	Activities	Total cost	Costs per years (thousand USD)				
			1st year	2nd year	3rd year	4th year	5th year
1.	Organisation, Support, and Development of the JINR Human Resources Programme	6192,5	1089,1	1171,5	1246,9	1312,2	1372,8
<b>Total</b>		<b>6192,5</b>	<b>1089,1</b>	<b>1171,5</b>	<b>1246,9</b>	<b>1312,2</b>	<b>1372,8</b>

**Cost estimates for the theme (thousand USD)**

№№ of items	Budget items	Total 2019–2023	Including 2019
1	Salaries	2782,7	474,1
2	Social insurance contributions	840,6	143,2
3	Social welfare fund	180,8	30,8
4	International cooperation	585,9	108,2
5	Materials	70,4	13,0
6	Equipment	87,3	16,1
11	Scientific and information support	1627,9	300,6
15	Communication services	16,9	3,1
<b>Total</b>		<b>6192,5</b>	<b>1089,1</b>

**AGREED:**

**JINR Chief Scientific Secretary**

\_\_\_\_\_/\_\_\_\_\_/\_\_\_\_\_  
 “ ” \_\_\_\_\_ **2018**

**Laboratory Director**

\_\_\_\_\_/\_\_\_\_\_/\_\_\_\_\_  
 “ ” \_\_\_\_\_ **2018**

**Head of Planning and Finance Department**

\_\_\_\_\_/\_\_\_\_\_/\_\_\_\_\_  
 “ ” \_\_\_\_\_ **2018**

**Laboratory Economist**

\_\_\_\_\_/\_\_\_\_\_/\_\_\_\_\_  
 “ ” \_\_\_\_\_ **2018**

**Head of Science Organisation Department**

\_\_\_\_\_/\_\_\_\_\_/\_\_\_\_\_  
 “ ” \_\_\_\_\_ **2018**

**Theme leader**

\_\_\_\_\_/\_\_\_\_\_/\_\_\_\_\_  
 “ ” \_\_\_\_\_ **2018**