

Evaluation Report

CIFRA

July 2021

Alan J. Hurd

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Dear Dr. Fahmi,

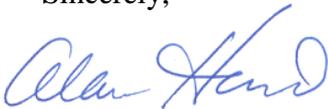
By this letter I respectfully transmit my evaluation of the International Centre for Advanced Training and Research in Physics (CIFRA).

My key finding is that the criteria for renewal of a Category 2 UNESCO Centre have been substantially met or exceeded.

I have also drafted and attached an agreement for Cat2 Centre renewal based on the prevailing UNESCO model agreement.

It has been a pleasure working with the fine people at CIFRA, UNESCO, and the Romanian Ministry of Research, Innovation, and Digitization.

Sincerely,



Alan J. Hurd

Executive summary

Evaluation of CIFRA in the summer of 2021 found substantial adherence to the criteria for renewal of a Category 2 Centre as defined by the UNESCO Strategy [Paris, 2019], paraphrased:

- agreed objectives achieved
- relevance of contribution to prevailing program
- relevance of activities to the centre
- quality of coordination and interaction with UNESCO and National Commissions
- partnerships
- nature and efficiency of governance
- financial resources sustainability and viability
- autonomy for execution of activities.

An analysis of the strengths, weaknesses, opportunities, and threats (SWOT) highlighted many strengths and a few weaknesses. Among these highlights are competitive research in nuclear and materials physics, exceptional educational outreach for capacity building, and outstanding programs in summer schools and tutorial opportunities.

Should renewal occur, the Centre, UNESCO, and the Romanian Government stand to realize and benefit from some of the identified opportunities if certain threats are overcome. Threats to this agenda include renewal of the Cat2 Centre and competing for external research grants.

Recommendations for CIFRA include, paraphrased:

- Negotiate a path for Cat2 renewal between the three parties, CIFRA, UNESCO, and the Romanian Government, by addressing funding needs.
- With the advice of the International Scientific Council and public health authorities, pursue a safe return to faculty and student participation in meetings and collaborations.
- Fully develop and utilize partnerships within the UNESCO network of institutes and centres, especially ICTP, for both research and science capacity building.
- Seek a way to fund at a higher priority level the experimental cross product of physics and entrepreneurship.
- Capitalize on the outstanding success of many educational outreach initiatives pursued by CIFRA's many imaginative, dedicated faculty members.

Background information

History

The International Centre for Advanced Training and Research in Physics emerged from a critical meeting in March 2012 with Irina Bokova, Director General (DG) of UNESCO, following the closure of a Category 1 centre in Bucharest. A feasibility study for a Category 2 centre was undertaken by a task force that included J. Niemela of the International Centre for Theoretical Physics (ICTP) in Trieste, who provided some of this history. Although it required five years of advocacy to obtain funding and final approval, CIFRA was established by UNESCO as a subsidiary—with legal independence—of the National Institute of Materials Physics (NIMP) in December 2015. The Romanian legislature approved the agreement with UNESCO, here referred to as the “Founding Agreement”, in February 2017. This five-year, bipartite agreement is up for renewal in 2022.

Located in the “science park” Magurele suburb of Bucharest, CIFRA enjoys the proximity of several physics-related institutes including NIMP. The historic, refurbished Otetelesanu Castle provides an outstanding setting for theoretical and computational physics (there are no labs) including residences for students.

Governance

The governance structure of CIFRA, set forth in the Founding Agreement, involves three entities,

1. International Governing Board, chaired by a representative of the Government, with the Centre Director serving as an invited, non-voting member,
2. International Scientific Committee, appointed by the Centre Director, and
3. Secretariat, consisting of the Director and staff.

The model agreement adopted by UNESCO in 2019, which will presumably be the template for a new agreement in 2022, provides for a seat on the governing board by a representative of the DG of UNESCO. The model agreement does not provide for—but does not disallow—a non-voting seat with the governing board for the Director.

More significantly, the upcoming agreement will be tripartite between UNESCO, the Romanian Government, and CIFRA. (CIFRA was not a party, of course, to its own Founding Agreement.)

Context of assessment

Funding for CIFRA has been provided by Romanian government grants under the prevailing science ministry. Both leadership and structure have been fluid in recent years, leading to a state of uncertainty and continual justification although funding has remained relatively stable. As a branch of NIMP, CIFRA has legal autonomy and responsibility but is not fully independent financially except in the case of competitively won grants. “Nucleus” funding through NIMP constitutes about 60% of CIFRA’s funding, the balance being competitive grants.

UNESCO does not provide funding to Cat2 centres; rather, it requires cost-recovery from CIFRA or Romania of US\$1000 per year.

Under a new name and structure, the Ministry of Research, Innovation, and Digitization (MRID) anticipates difficulty in nucleus funding under the new tripartite agreement.

Programs

Research

The research agenda at CIFRA is currently

- nuclear physics, including neutrino properties, double-beta decay, and other rare decays,
- condensed matter physics, focused on a wide spectrum of materials and phenomena, and
- space and security science.

Strong partnerships have been developed to carry out this agenda. With a plea to the reader for tolerance of acronyms, the list of partnerships includes ICTP, JINR, CEI, TWAS, NIMP, IFIN, NIOE, ISS, NIEP, and the Universities of Comenius, Bucharest, and Politehnica.

The CIFRA strategic plan calls for changes in emphasis—bold changes in education discussed below—but stability in research topics. The expected research agenda adds these emphases:

- advanced nuclear physics theory, including phenomena beyond the Standard Model, and
- quantum phenomena in condensed matter.

There is a strong motivation at CIFRA to be increasingly competitive for competitive grants, nationally and internationally. Computing infrastructure must keep pace.

Education

The jewel in CIFRA's program is educational outreach for capacity building in Africa and Central Europe. Central to this area is the partnership with ICTP, through which many joint programs for African students, schools and workshops flow.

Additional partnerships are very important to student activities, such as with the Joint Institute for Nuclear Research (JINR) in Dubna, who cohosts the Pontecorvo Neutrino Physics School, pandemic factors allowing.

The very competitive Eugen Ionescu scholarship program, funded by the Romanian government, enables doctoral and postdoctoral students from Francophone Africa to spend three months in Romania for research. About 30% of applicants are accepted. Even nonwinners often come to CIFRA anyway, taking advantage of onsite housing and the opportunity to apply for OEA-ICTP grants.

In-house mentorship of students is evidently outstanding judging from the universal satisfaction of CIFRA students interviewed. A good example of this mentorship is the weekly meeting of nuclear physics researchers at which students are given the opportunity to describe their research progress in a collegial setting.

Dissemination

This term applies equally to publications and meetings of all sort. With the restrictions imposed by the pandemic since 2020, along with a natural overlap with the education area, credit for active dissemination is spread across faculty and students alike.

For example, the development of curricula and digital pedagogy is first-rate at CIFRA under the ERASMUS Pulse effort for developing countries. A very exciting opportunity is developing tutorials and kits for young researchers, such as an active program with high school students in microprocessor technology and programming. This "bridge to research" serves Central Europe and Africa well. Indeed, advanced theoretical models and data analyses suitable for researchers are being developed at CIFRA.

Future plans package these efforts in the context of broad programs in UNESCO and Romania. The Global Microscience Programme explores educational kits under a partnership involving UNESCO and IUPAC, the International Union of Pure and Applied Chemistry now located—conveniently for CIFRA—in Trieste.

Under the TRROL project, Training and Research in Romanian Laboratories, has advocated for funding to work with other Romania institutions and ICTP. TRROL aims to accelerate the building of science capacity in low-income countries.

Strategic Planning

In preparation for the new agreement with UNESCO, CIFRA will pursue

1. Advanced research theory in nuclear and condensed matter physics, including double-beta decay, beyond the Standard Model, and space and security science,
2. Theoretical models and computer analysis tutorials,
3. Tutorials for young researchers,
4. Aggressive applications for international projects, and
5. Achieve publications in high impact ISI journals.

Expanding on points 2 and 3, the educational mission of CIFRA will include continued participation in

- ERASMUS PULSE, serving developing countries with digital pedagogy, physics lab kits. CIFRA will take advantage of its European networks to implement two experimental platforms in African labs.
- Global Microscience Program with UNESCO and IUPAC to design and disseminate educational kits.
- TRROL as a bridge to research for students in Eastern, Southeastern Europe and other developing countries. TRROL establishes scientific contacts and encourages gender balance. The goal is to involve students from Africa, Portugal, Brazil, and Central Europe.
- Schools of all kinds, including the redoubtable Pontecorvo School, Magurele-based schools with sister physics institutes, TEDx, the Romanian Master Physics Cluster, and the International Physics Competition.

To fund this aggressive agenda over the eight-year term, CIFRA plans to work with MRID to increase competitiveness for funding opportunities. With MOUs with ICTP and JINR as a basis, along with joint activities within the Cat2 network, CIFRA intend to compete nationally and internationally for projects.

Analysis and Recommendations

Returning to the matter of agreement renewal, UNESCO considers the following criteria, in full detail, for Category 2 Centre renewal [from the UNESCO Strategy, Paris, 2019]:

Renewal Criteria

1. the extent to which the institute or centre's objectives as set out in the agreement signed with UNESCO were achieved;
2. the relevance of the contribution of the institute or centre's programmes and activities to the achievement of UNESCO's prevailing Approved Programme and Budget (C/5) at the time in which it was designated, including global strategies and action plans as well as sectoral programme priorities, as defined in the agreement;
3. the relevance of the contribution of the activities of the institute or centre to global development agendas;
4. the quality of coordination and interaction with UNESCO, both at Headquarters and in the field, as well as with National Commissions, other thematically-related category 1 and 2 institutes or centres with regard to planning and implementation of programmes;
5. the partnerships developed and maintained with government agencies, public or private partners and donors;
6. the nature and efficiency of the institute or centre's governance, including organizational arrangements, management, human resources and accountability mechanisms;

7. the financial resources available for ensuring sustainable institutional capacity and viability, and,
8. the extent to which the institute or centre enjoys within its territory the autonomy necessary for the execution of its activities and legal capacity to contract, institute legal proceedings, and to acquire and dispose of movable and immovable property.

The objectives (and functions) of CIFRA, referenced in criterion 1, are written in its Founding Agreement.

Objectives

- a. provide facilities and opportunities for advanced training and research for scientists from Central and Eastern European countries, in addition to least developed countries in Africa, with an additional mandate to promote women in science throughout its programmes;
- b. develop and coordinate research-oriented advanced studies in physics and related interdisciplinary themes;
- c. provide expertise to decision makers, educators and the general public to strengthen the research and development potential in the region;
- d. develop outreach activities (seminars, conferences, workshops) in cooperation with national and international institutions, providing an international forum and enhancing collaborative networks among scientists from different countries in the region;

with the attending functions:

- e. advanced training and development through scientific research, carried out by the Centre's permanent staff and by short- and long-term visitors, in cooperation with national and international institutions and with participation in international research projects;
- f. scientific events and knowledge transfer through short-term activities, developed in cooperation with UNESCO including, workshops, conferences and seminars compatible with UNESCO programmes.

These objectives and functions map to the renewal criteria in one way or another. However, it is not sufficient to analyze points a through f to judge criteria 1 through 9 because many of the judgment criteria are operational while the objectives cover research, education, and dissemination.

Using a standard SWOT analysis, evidence was collected from diverse sources¹ and mapped to renewal criteria (1-9), Centre objectives (a-f), and UN Sustainable Development Goals (1-17) to assess success and relevance. A table of SWOT findings, aggregated from nearly 100 individual inputs, is shown in the SWOT Attachment.

Many Strengths (17) and Opportunities (12) were recorded, which can be reviewed in the SWOT table. In general, Opportunities are forward-looking, aspirational, and partly realized over the period of evaluation; to fulfill their potential for impact, one must assume renewal of the CIFRA agreement and continued operations. As an example, the first-listed opportunity cites the exciting “bridge to research” effort to bring advanced tutorials, kits, and theoretical models to the

¹ Evidence was collected from governing documents, annual reports, overview presentations, strategic plans, and 22 interviews with faculty, students, partners, and stakeholders in UNESCO, ICTP and the Romanian government

physics communities in Central Europe and Africa. This goal is well on its way to full impact, but continued effort will compound forward under a renewal agreement.

Similarly, 7 Strengths are educational, 2 are in research, 2 relate to infrastructure, 2 to outstanding partnerships, 2 to national priorities, 1 to international priorities, and 1 to people (attracting talent). These Strengths primarily answer Renewal Criteria 1, 2, 5, and 6 and secondarily (not shown in table) Criteria 3, 4, and 7. Centre Objectives a, b, c, e, and f are met by Strengths evidence while Opportunities meet Objective d.

By this analysis, across SWOT categories, all of the Renewal Criteria for Category 2 centres are met or exceeded.

The evaluation revealed 7 Weaknesses and 2 Threats. Several of these citations relate to the lack of full engagement during the pandemic. While CIFRA has weathered the storm well, several operational and research items require catching up, such as meetings of international research collaborations and the International Science Council.

Threats are entirely about funding in the future: Core “nucleus” funding and competitive research grants have not been guaranteed for renewal, but prospects appear to be good.

CIFRA’s impact on UN Sustainable Development Goals focus strongly on Goals 4 (Quality Education) and 9 (Industry Innovation and Infrastructure), and several others (3, 4, 10, 16, 17) are answered by CIFRA accomplishments.

Recommendations

- Negotiate a path for Cat2 renewal between the three parties, CIFRA, UNESCO, and the Romanian Government, by addressing continued need for national “nucleus” funding and competitive research funding from national and international sponsors. Success with external funding would insulate CIFRA from changes to the national political landscape.
- With the advice of the International Scientific Council and public health authorities, pursue a safe return to faculty and student participation in meetings and collaborations.
- Fully develop and utilize partnerships within the UNESCO network of institutes and centres, the most important of which is with ICTP, for research and capacity building.
- Seek a way to fund at a higher priority level the experimental cross product of physics and entrepreneurship. With patience, the aspirational goal of industrial funding and royalty income may be realized in several years.
- Capitalize on the outstanding success of many educational outreach initiatives pursued by CIFRA’s many imaginative, dedicated faculty members thinking about initiatives in Microscience, TRROL, Friendly Programming tutorials, and the like.

Conclusion

The key finding of this evaluation is that CIFRA has managed well with available funding despite a global pandemic and the many challenges it presented. Strategic planning points strongly to areas in which CIFRA could do more and have greater impact with continued and increased resources. To implement aggressively UNESCO priorities such as the Microscience Program, and to meet robustly national priorities in applied research and education, CIFRA may need flexible, special funding mechanisms—such as research centers resembling Europe’s ERCs—to grow more independence under government funding constraints. The first step is renewal.

Attachments

SWOT analysis

SWOT	elaboration	Renewal Criteria	Centre Objectives	UN SDG
s	The Eugen Ionescu Scholarships for Francophone African countries is funded by Romania and strongly executed by CIFRA. Quality is high, with some 30% acceptance; even nonwinners can come to CIFRA anyway, taking advantage of onsite housing and the opportunity to apply for OEA-ICTP grants. Large gaps in preparation, noticed by faculty and students alike, have been rapidly mitigated by tutoring. The African Science Academy partnership provides on-the-ground help in executing outreach.	2	a	4
s	In education and dissemination, CIFRA has documented accomplishments through their ERASMUS Pulse digital pedagogy and laboratory curriculum design, continued strong participation in the Pontecorvo school including student posters, a burgeoning effort on training and research for Romanian labs (TRROL), and joint fellowships and workshops with ICTP. Central Europe and Africa benefit by CIFRA efforts	2	b	4
s	The plan to expand digital pedagogy through ERASMUS Pulse in Africa, Portugal, and Brazil is a strong idea.	2	e	4
s	Notable efforts in education include Pontecorvo, TEDx, and international physics competitions.	2	e	4
s	As noted by a key partner institution, CIFRA serves a special role as a center-pivot for low-income countries in the Central Europe Initiative. "CIFRA's role as an important hub in Romania and in the region is unusual in that part of the world."	5	a	17
s	The addition of TWAS partnership strengthens the case for Cat2 renewal. Continued collaborations at international facilities such as DUNE serve to provide meaningful research experiences for students.	5	f	17
s	CIFRA research accomplishments are well disseminated by publications and conferences from Asia to Africa to America.	1	b	9
s	Outreach to Africa is a very clear strength on which to build. The pipeline with Francophone countries, particularly Morocco, is remarkably strong: Some faculty have mentored as many as 30 students.	2	a	4
s	CIFRA contributions to international schools in physics has definitely boosted visibility and quality toward capacity enhancement goals. The Pontecorvo School, with JINR, is the premier example of high impact outreach. ICTP clearly appreciates partnership with CIFRA as the Centre's established position in educational outreach is solid and growing.	2	a	4

s	CIFRA-led educational outreach in the Microscience Programme will bring continued visibility and high impact at all educational levels. Friendly Programming tutorials in advanced topics (QTIP quantum toolbox) are unique and should have international impact.	2	a	4
s	The "castle" is a remarkable environment for a research institute. CIFRA should take full advantage of the special fact that on-site housing is available to students, albeit limited.	1	a	9
s	The costs of research at CIFRA are very low and should provide a competitive advantage for attracting research funding.	1	a	10
s	"CIFRA is now an established member of the science family in Romania." It's location in the Mugerele Science Park helps focus programs in areas of importance to Romania.	1	b	9
s	Having a high level MRID official as President of the International Governing Board of CIFRA provides important visibility to the Centre's accomplishments and capabilities.	1	c	16
s	Because joint programs are more efficient, in many ways, than solo activities, CIFRA is to be congratulated on establishing a set of institutional partnerships. The emphases of these partnerships enhance research and educational outreach including dissemination. Key partners are ICTP, JINR, Universities of Trieste, Comenius and Bucharest, and large facility-based collaborations at CERN, Dubna, Elettra, DUNE, and SuperNEMO.	5	f	17
s	Several CIFRA faculty have established standing in physics to attract students, postdocs, and other quality faculty. Mentorship is excellent, and students enjoy the collegial atmosphere. The weekly discussion seminars are particularly helpful to that atmosphere.	6	e	4
s	"CIFRA is good enough to win [national] grants." The key is to set objectives that are important to Romania.	1	b	9
w	CIFRA's status as an academic institution should be emphasized in negotiations with international companies toward educational discounts. An institution need not be degree-granting for such amenities in many countries. The issue may extend to software, journal subscriptions, and conferences. This factor may reside at the national government level, as CIFRA is likewise not eligible for educational funds from the government.	2	a	16
w	CIFRA and other research and educational institutes in Romania inherit some baggage from the closed borders of the past.	5	d	4
w	A potential weakness to be remedied for Cat2 renewal is full engagement in post-pandemic period. Coherence to a program must be evident by publications, education, productivity, Science Council engagement, and research relevance to Romanian government objectives. SDGs 4 (education) and 9 (innovation) are essential metrics for UNESCO expectations.	5	a	3

w	Government bureaucracy requires diligent dieting in all countries and Romania is no exception. The processing of a UNESCO Category 2 agreement should not require review by as many as 10 ministers. Similarly, stability at the science ministry level is important to surety of CIFRA operations.	1	c	9
w	Although the relationship with NIMP is generally a positive one, CIFRA's embedded status with NIMP weakens its voice and independence. To outside observers, CIFRA and NIMP are hard to distinguish. Contractual, managerial, and legal autonomy is important to establish CIFRA's position in the UNESCO Cat2 network	1	a	16
w	The pandemic diminished scientific interactions around the world. As the pandemic abates in Europe, the CIFRA International Science Council should reconvene and provide the advice required for continual improvement in research programs.	1	f	3
w	Although the faculties' interests are varied and interdisciplinary at CIFRA, the external community perceives nuclear physics theory as dominant at the Centre.	1	b	9
o	A very exciting opportunity is the leadership CIFRA has exhibited in developing tutorials and kits for young researchers in developing countries. This "bridge to research" serves partner countries in Central Europe well. Indeed, advanced theoretical models suitable for researchers are being developed at CIFRA. Such publications tend to draw high citations.	2	e	4
o	In dissemination and educational outreach, the many efforts underway at CIFRA are outstanding. Opportunities deriving from this success abound, notably Microscience, TRROL, CEI programs, and entrepreneurship. Extending the program in schools on research topics, the desire to educate the educators in entrepreneurship and gender equity could pay strong dividends to Romania over the long term (a decade or more). Interdisciplinary "cross-technique" training programs, involving graduate students through postdocs, through project-based learning could serve CIFRA and Romania well.	2	e	4
o	The intent for Cat2 renewal has been demonstrated by CIFRA's adherence to the UNESCO strategy for Cat2 institutions. If executed well, the stability of a long-term relationship will ensure deliverables more than other factors after funding itself.	5	f	17
o	Partnerships are the key to resource-limited research programs, and the Cat2 network is an essential ingredient to CIFRA's future success. Their chances for funding success are enhanced by the quality of their partnerships, which are currently very good and growing stronger.	5	f	17
o	CIFRA has credentials in the CAT2 network and should make use of this relationship for new collaborations with CAT2 institutes in France, Netherlands, and elsewhere. ICTP-Brazil might be a good choice for astro-particle and nuclear physics.	5	f	17

o	Industrial participation at CIFRA has at least one existence proof, and their foresight in hiring a practicing entrepreneur promises exciting program development.	1	d	9
o	Using built-in ministerial contacts, CIFRA should explore the possibilities of improved flexibility in the Romania Fourth National Plan for Research by expanding eligibility for EC and national funding opportunities and ERC-like grants available to consortia, such as in hybrid quantum systems, neutral network approaches to computational tools, and topological materials.	1	b	9
o	Renewal of the CIFRA contract would provide a clear pathway for talented students in the pipeline to stay at CIFRA for postdoctoral and permanent positions.	6	b	4
o	Senior faculty should be further encouraged to produce textbooks and manuscripts for the greater esteem of the Centre.	1	d	4
o	With Government help, CIFRA has the substance to attract established researchers around whom a team could be built, thereby further attracting quality talent at the postdoc level.	1	b	17
o	The only physical infrastructure request that emerged from faculty and students is the need for a cluster upgrade to assume more challenging research goals in condensed matter and nuclear physics. However, in the next decade CIFRA may require additional infrastructure--both physical and bureaucratic--to participate strongly in the UN Sustainable Development Goals.	1	a	9
o	CIFRA-led educational outreach in the Microscience Programme will bring continued visibility and high impact at all educational levels. Friendly Programming tutorials in advanced topics (QTIP quantum toolbox) are unique and should have international following. Research-oriented codes, such as user-friendly software for scattering experimental analysis, are complementary to this outreach.	2	e	4
t	The problem of core program funding for CIFRA is an existential threat to the enterprise. Stability in governance is essential and time will tell whether Ministry leadership and organization is settled.	5	f	16
t	Winning research grants is a challenge in any large system, and Romania and the European Commission are not excepted. CIFRA "must keep pace" in research productivity to compete. In some funding opportunities, matching funds are required, which raises the bar for entry; a possible antidote is joining with larger research institutions within UNESCO. Romanian funding is tied to national priorities, which can be targeted, with appropriate artful reference to UNSDGs, within the CIFRA portfolio. Taking this approach in agreement renewal may elicit stronger governmental financial support and UNESCO commitment.	1	b	16

Interviews

Full name	Position	Interview
Dr. Sabin Stoica	Staff - Senior researcher I /Director	26-Jun
Dr. Sabin Stoica	Staff - Senior researcher I /Director	27-Jun
Dr. Joseph Niemela	ICTP	28-Jun
Dr. Madlen Serban	Secretary general of the Romanian National Commission for UNESCO	30-Jun
Dr. Ahmed Fahmi	Chief of the Section of Innovation and Capacity Building in the Natural Sciences sector at UNESCO	30-Jun
Dr. Victor Barsan	Staff - Senior researcher I	30-Jun
Dr. Aurelian Catalin Galca	Staff - Senior researcher I	1-Jul
Mr. Outman El Khouja	ICTP-OEA scholarship	1-Jul
Ms. Ilhame Assahsahi	Student - AUF-scholarship	1-Jul
Dr. Fedor Simkovic	Comenius University, Bratislava	1-Jul
Dr. Andrei Neacsu	Staff - Senior researcher III	2-Jul
Vasile Alin Sevestrean	Student - Assistant researcher/ master	2-Jul
Dr. Camelia Untescu Blanda	Staff - researcher	2-Jul
Dr. Valeriu Moldoveanu	Staff - Senior researcher I	2-Jul
Dr. Cristian Mihail Teodorescu	Staff - Senior researcher I/ President, NIMP Sci Council	3-Jul
Dr. Ionut Enculescu	Director general of NIMP, the national research institute where CIFRA is a subsidiary with legal independence	3-Jul
Mr. Stefan Alexandru Ghinescu	Student - Assistant researcher/ PhD	3-Jul
Mr. Ovidiu Vasile Nitescu	Student - Assistant researcher/ PhD	3-Jul
Dr. Cristian Litan	secretary of state, Ministry of Research, Innovation and Digitization	5-Jul
Mrs. Mioara Dobre	Chief Financial Officer	5-Jul
Sandro Scandolo	ICTP. Chair of CIFRA International Science Council	8-Jul
George Thompson	ICTP, Chair of CIFRA International Governing Board	11-Jul

UN Sustainable Development Goals

- (1) [No Poverty](#)
- (2) [Zero Hunger](#)
- (3) [Good Health and Well-being](#)
- (4) [Quality Education](#)
- (5) [Gender Equality](#)
- (6) [Clean Water and Sanitation](#)
- (7) [Affordable and Clean Energy](#)
- (8) [Decent Work and Economic Growth](#)
- (9) [Industry Innovation and Infrastructure](#)
- (10) [Reducing Inequality](#)
- (11) [Sustainable Cities and Communities](#)
- (12) [Responsible Consumption and Production](#)
- (13) [Climate Action](#)
- (14) [Life Below Water](#)
- (15) [Life On Land](#)
- (16) [Peace Justice and Strong Institutions](#)
- (17) [Partnerships for the Goals](#).