

2024 Annual Report

Swiss Federal Institute of Sport Magglingen SFISM

SFISM

Swiss Federal
Institute
of Sport
Magglingen



Bern University
of Applied Sciences



Schweizerische Eidgenossenschaft
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Federal Office of Sport FOSPO

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Foreword

Accreditation in 2022 played a key role in the SFISM's development into a federal institute of higher education in recent years. Legally, the SFISM is fully integrated into the Federal Administration. The institutional accreditation as a higher education institution was a further step in the development of the SFISM, and this already bore fruit in 2024.

Based on expert feedback from the reviewers and with the support of the Federal Office of Sport FOSPO administration and management, we implemented some features typical of universities. An SFISM advisory board advises the FOSPO senior management on strategic issues relating to the institute, and the SFISM rector may be involved in these discussions. There is now also a performance agreement between the FOSPO senior management and the SFISM clearly setting out the SFISM objectives for the coming year. A basis for stakeholder participation was established with the creation of a staff representative body, a student association and an alumni organisation.

Unsurprisingly, the position of higher education lecturer is not listed in the Federal Administration staff reference functions. The SFISM drew up a list of university-specific functions with the active support of the FOSPO administration and HR department. These functions are spread over three development stages. This means that the SFISM can offer employees specialist and management careers according to their abilities. Finally, we created a digital quality assurance platform providing information and answers to queries from SFISM staff.

The development of the SFISM into an institute of higher education is not intended to separate the SFISM off from the other areas of FOSPO; indeed, its place as an integral part of the federal office is central to its profile. The SFISM continues to participate in many of the activities and topics dealt with by FOSPO. It benefits from the unique infrastructure and the proximity to sports policy and its application.

We hope you enjoy reading this report.



Dr Urs Mäder
SFISM Rector



Dr Thomas Wyss
SFISM Deputy Rector



Rectorate Office team

SFISM consolidation and networking

The move to the Lärchenplatz laboratories kept many members of staff busy. Artworks by BFH students added a playful touch to the clear architectural forms of the building. A lot of time was dedicated to the reform of the Bachelor's programme. The involvement of students and staff was further encouraged. Ethics and diversity were anchored in FOSPO's training and continuing education programmes, and there was a focus on innovation and women-specific issues. International ties were strengthened.



Full-time equivalents **102**

Employees **129**



Lärchenplatz

- Longest beam in roof: 20m × 1.30m
- Indoor sprint tunnel: 90m
- 356 wooden facade slats, 10.65m long
- 5900 m³ of concrete > 14,750 tonnes > 730 truck trips
- 600 tonnes of steel

Art interventions

18 installations

Highlights from collaboration with Bern University of Applied Sciences BFH

The BFH and the SFISM continue to maintain a close dialogue. Cooperation takes place on various committees and in a number of projects, as the following examples show.

A wide variety of illustrations have adorned the walls and ceilings of the new Lärchenplatz building since summer 2024. These were created and applied by thirteen students from the Bern Academy, part of BFH of the Arts (BFH). They remind staff, clients, athletes and guests of the SFISM's successful accreditation and its continued development. The illustrations not only reflect the multifaceted nature and commitment of the SFISM as the Swiss Federal Institute of Sport in Magglingen, but also emphasise the importance of diversity, sustainable development and the value in adopting different perspectives. This project illustrates how artistic and academic synergies can open up new horizons and make shared values visible.

Over 515 students from the BFH and the SFISM took part in the traditional BFH sports day, held in Magglingen on 15 May 2024. The event was held under the motto 'Multikulti ... Zämä ... Ensemble ... Insieme' and was once again organised by an SFISM student committee.

The previous day, the jointly organised Swiss University Golf Championship took place at the Neuchâtel Golf and Country Club. Forty-seven people from eleven Swiss and two international universities took part in the event, which took place in perfect conditions.

International cooperation and intercultural learning through sport

The SFISM's international network was further expanded in 2024. A new partner university was acquired in Rome. Furthermore, a delegation from Deggendorf Institute of Technology (DIT), including former president Prof. Peter Sperber, university chancellor Birgit Augustin and Prof. Jens Martin, together with SFISM rector Dr Urs Mäder, agreed on further cooperation between the two institutes.

After the success of the International Summer School at the SFISM in 2022, a second event of its kind was held at the DIT from 28 July to 10 August 2024. The main theme was Intercultural Learning in Sports and Physical Activity. Four partner higher education institutions (Douglas College Vancouver, University of Hamburg, DIT and SFISM) took part. Four lecturers and thirty students, eight of them from the SFISM, engaged in sports typical for the participating countries, and workshops and seminars were held – in keeping with the motto 'United through sport and culture'. The students completed assignments on topics such as the Olympic Games and national recommendations for physical exercise, using methodological approaches to compare practices in the different countries. The participating students appreciated making new acquaintances, broadening their intercultural experience and leaving their comfort zone.

SFISM Ordinance revised in the interests of quality development

A review of the degree programmes highlighted a need for action and improvement. Amendments were required in the law in order to make them more compatible with a career in elite sport and a healthy work-life balance, and to take greater account of the growing importance of interdisciplinary skills. This process was successfully completed in 2024 and the new requirements came into force on 1 November. The reformed Bachelor's degree programme will be launched in the autumn semester of 2025 and the new Master's degree programme in the autumn semester of 2026.



Student mobility

Outgoing students: 21

(as part of the immersion semester)

Incoming students: 2



Partner universities

International mobility

- 22 in Europe
- 3 worldwide



Media library

- Number of enrolled university members: 267
- Loans (from SFISM and via Swiss library courier): 1244
- Digitisation orders: 155

University sports

A number of SFISM students took part in student competitions at home and abroad:

- WUC Ski Orienteering, (participants from 14 nations)
 - Delia Giezendanner (two bronze medals)
 - Gian-Andri Müller
- Lionel Schwander won gold in judo in the 66kg category at the 2024 European Universities Games (EUG) in Debrecen-Miskolc, Hungary
- At the Swiss University Futsal Championships, held in Basel in November, a team of SFISM students finished sixth out of nine university teams



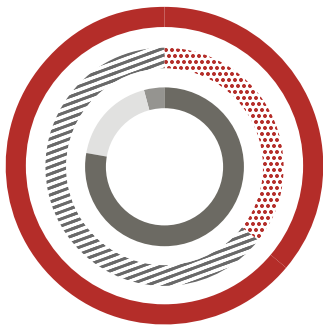
R+D projects published: 25



Staff Office team

Education and training

Significant progress was made in the development of education and training in 2024, not least thanks to the involvement of the new student association. The reform of the Bachelor's degree programme took up a lot of resources; in the coming year this will lead to a new, student-centred teaching concept that seamlessly combines sport, career and science, allows for greater diversity and is geared towards the development of future skills. The amendment of the SFISM Ordinance is an important milestone along this path. The new concept forms an important basis for developing the further training programme in a targeted manner over the coming years.



■ Bachelor of Science	●● Women*	46
129 students	▨ Men*	83
	■ German-speaking	100
	■ French-speaking	24
	■ Italian-speaking	5

Bachelor of Science in Sports

2024 was marked by intensive preparations for the upcoming reform of the Bachelor study programme. SFISM staff extensively analysed the new concepts in order to create a sound basis for the reform. Special retreats were held to this purpose. First experiences were gained during the pilot week and the students' feedback was integrated into the development process.

An important milestone was the information event in November, at which the reformed Bachelor's degree programme was presented and explained to interested candidates.

Twenty-six graduates – 8 women and 18 men – received their Bachelor's degree at a formal ceremony. Fabio Strauss and Nadja Schneider were honoured for the best Bachelor's theses at the graduation ceremony.

*The data recorded shows the number of men and women. The SFISM is aware that diversity includes other categories.



Ausbildungshalle
Salle de formation

Education and Training team



Master of Science in Elite Sports
62 students

- Women 23
- Men 39
- German-speaking 49
- French-speaking 11
- Italian-speaking 2

Master of Science in Sports with Specialisation in Elite Sports

Forty-four students started the Master’s degree course in Elite Sports in autumn 2024. Of these, 15 chose the Sports Management specialisation and 29 the Coaching specialisation.

In the autumn semester, lessons took place for the first time in the new Lärchenplatz sports centre. In the modern laboratories, the students gained insights into performance diagnostics in elite sport in dialogue with the specialists. A large number of students made the most of this unique opportunity and took part in some exciting discussions. Some students combine their studies with top-class sport, paid work or caring responsibilities. They are actively supported by their fellow students, who prepare documents and share lecture notes with them.

The intensive block week in the middle of the semester was a highlight for all. Students visited the SRF SSR television studios and watched the pre-production stage of the programme Sportpanorama. They then travelled to Ticino, where they took part in two days of team building and sports management. Back in Magglingen, they listened to exciting talks on junior competitive sport, technical training and women in competitive sport, the latter a new topic in the programme.

26 students on the Master of Science in Sports with Specialisation in Elite Sports received their degrees on 25 October. Livio Abächerli and William Häni received the first prize for the best Master’s dissertation. Many of the graduates are already working in the professional fields of elite sport.



Master of Science in Sports Sciences
82 students

- Women 26
- Men 56
- German-speaking 34
- French-speaking 48
- Italian-speaking 0

Master of Science in Sports Science

In 2024, six students began their Master’s degree in the spring semester and 39 in the autumn semester, 12 of whom were SFISM graduates. The degree enables them to work as teachers at upper secondary level (baccalaureate schools and vocational schools) or possibly to go on to do a PhD. It also enables students to complete their teaching studies at a university of teacher education so that they can teach sports in baccalaureate schools and vocational schools.

There is a growing number of applications for the Health and Research option. A record number of 10 students signed up for the programme.

The students come from higher education institutions both in Switzerland (SFISM, University of Fribourg, University of Bern, University of Basel, Bern University of Applied Sciences) and abroad (France, Germany, Luxembourg, Romania).

Continuing education

With its numerous continuing education programmes in the sports environment, the SFISM, as a higher education institution, fulfils its social responsibility by providing opportunities for lifelong learning. Over 100 participants took part in CAS continuing education programmes, courses and the newly created national summer schools. In 2024, more than 50 ETCS were awarded in a range of degree programmes.

The SFISM built on its primary partnerships with the Bern University of Applied Sciences and Swiss Olympic and will continue to do so going forward. A proactive communication campaign involving numerous social media posts helped to raise the profile of continuing education at the SFISM, both within and outside the institute. These efforts were rewarded with an increase in the number of participants in the continuing education programmes.

CAS SFISM Sports Facilities

In January 2024, the eighth edition of the CAS SFISM Sports Facilities was launched, this time exclusively in German to accommodate those registering. For the first time, elective modules were offered in two specialisations, Construction and Management. As a more holistic view of the sports infrastructure life cycle is taken, there is an increasing focus on the operation and management of sports facilities. This development was reflected in the number of registrations for this specialisation. The last two modules were run in November. Students must complete their final dissertations by the end of June 2025, thereby rounding off their CAS. They take advantage of the networking opportunities, the exchange of experiences in and outside the CAS modules and appreciate the practice-orientated further training.

- 15 participants CAS SFISM Sports Facilities, Construction
- 14 participants CAS SFISM Sports Facilities, Management
- 13 participants CAS SFISM Sports Facilities, individual modules (both specialisations)
- 6 female participants
- Participants from the cantons of St Gallen, Bern, Thurgau, Graubünden, Zurich, Basel-Stadt, Valais, Glarus, Ticino, Lucerne, Schwyz and Fribourg



Conferences held: 12



SFISM Social Media



Sports Coordination

In March 2024, a CAS was launched in the Sports Coordination programme. Students can choose between three options: confirmation of participation, certificate or full CAS.

The courses were again run in parallel in German and French. The newly developed module 6 of the CAS in Leadership programme was successfully completed. Many Sports Coordination alumni took the opportunity to expand their skills by upgrading their certificate to a full CAS.



A newly produced film in German and French gives a broad insight into the CAS programme.

Cooperation between Switzerland and Luxembourg was intensified, the SFISM being invited by the Luxembourgish Ministry for Work and Sport to present the Swiss local exercise and sports networks concept and its sports coordination programme.

The sports coordination conference attracted a record number of participants. The main topic, 'Sports policy at the centre of local physical activity and sports promotion', was very well received. Sports coordination to promote local and regional exercise and sports networks is a key feature of the federal government's grass-roots sports concept. It is to be expanded further where possible.

Sports management conference

The fourth sports management conference organised by the SFISM Sports Economics department was dedicated in 2024 to the topic of 'Empowering athletes in the sports system'. Organised for the first time by the Sports Systems group, the bilingual event featured keynote speeches, panel discussions and workshops. Partners such as Swiss Sport Managers, Think Sport, Swiss Olympic and Swiss Coach contributed greatly to its success.

Fabio Strauss – Entwicklung der physischen Voraussetzungen der unteren Extremitäten im Kunstturnen. Retrospektive Analyse von leistungsdiagnostischen Daten von Athletinnen und Athleten des Schweizerischen Nationalkaders im Kunstturnen auf Stufe Elite, Juniorinnen und Junioren

Betreuer: Dr. Christoph Schärer

Einleitung: Die physischen Voraussetzungen der unteren Extremitäten sind im Kunstturnen von grosser Bedeutung. An den sprungintensiven Geräten Boden, Pferdsprung und Schwebelbalken ist eine ausreichende Flughöhe entscheidend, um die Schwierigkeit der Sprünge zu erhöhen und diese kontrolliert landen zu können. Für solche Sprünge ist die Explosiv- und Reaktivkraft der unteren Extremitäten von entscheidender Bedeutung.

Das Ziel dieser wissenschaftlichen Arbeit ist es, die erhobenen Daten zu den Explosiv- und Reaktivkraftleistungen von Schweizer Kunstturnerinnen und Kunstturnern auszuwerten und die Werte einzelner Gruppen (z. B. U14, U16, U18 und Elite) zu vergleichen und mögliche Unterschiede festzustellen. Dadurch sollen die Entwicklungen der physischen Voraussetzungen der unteren Extremitäten veranschaulicht werden.

Methode: Zwischen dem 21. Januar 2013 und dem 20. Oktober 2023 wurden leistungsdiagnostische Daten von 125 Kunstturnerinnen im Alter zwischen 7 und 26 Jahren (Alter: 14.9 ± 4.0 Jahre) und 109 Kunstturnern im Alter zwischen 10 und 30 Jahren (Alter: 18.4 ± 4.5 Jahre) erhoben. Für die Datenerhebung wurden die leistungsdiagnostischen Tests Quattro-Jump (Explosivkraftfähigkeit) und Drop-Jump (Reaktivkraftfähigkeit) durchgeführt. Um die Testergebnisse der Gruppen U14, U16, U18 und Elite vergleichen zu können, wurde eine Varianzanalyse und danach ein Post-Hoc-Test durchgeführt. Für den Vergleich zwischen Frauen und Männern, sowie zwischen Athletinnen und Athleten, die einmal Teil des Nationalkaders der Elite waren zu jenen, die nie Teil des Nationalkaders der Elite waren, wurde ein T-Test für unabhängige Stichproben durchgeführt. Nebst der Prüfung der Varianzhomogenität sowie der Signifikanz, wurde die Effektstärke nach Cohen (1992) geprüft.

Resultate: Bei der geschlechtergetrennten Varianzanalyse der Kategorien U14, U16, U18 und Elite zeigten die Resultate, dass signifikante Unterschiede bei den Männern mit steigendem Alter über einen längeren Zeitraum zu beobachten waren als bei den Frauen. Während es beim Vergleich der Athletinnen der Kategorien U16, U18 und Elite nur noch vereinzelt signifikante Verbesserungen gab, war die Mehrzahl der Werte bei den Männern innerhalb der gleichen drei Kategorien signifikant (p-Werte Explosivkraft U16-U18 & U18-Elite: Frauen: 0.005-1.000; Männer: <0.001-0.729). Dies zeigte sich auch beim Vergleich zwischen Kunstturnerinnen und Kunstturnern, wobei die Signifikanzen, sowie die Effektstärken mit steigendem Alter generell stetig stärker wurden. Beim Vergleich zwischen Nationalkaderathletinnen und Nationalkaderathleten der Elite mit jenen, die nie im Elitekader waren, wurden keine signifikanten Unterschiede festgestellt.

Diskussion: Die Verbesserung der physischen Voraussetzungen in den unteren Extremitäten über mehr Altersstufen bei den Männern als bei den Frauen, kann auf die Veränderung der Kraftverhältnisse zwischen den Geschlechtern während der Pubertät zurückgeführt werden. Dabei beeinflussen unterschiedliche endokrinologische Prozesse die Kraftentwicklung. Aus diesen Gründen stagniert die Entwicklung bei den Frauen früher als bei den Männern, was durch die Resultate in dieser Arbeit bestätigt werden konnte. Weiter wird aus den Resultaten ersichtlich, dass die Explosiv- und Reaktivkräftigkeit allein, nur eine nebensächliche Rolle für die Aufnahme in das Elitenationalkader darstellt.

Konklusion: Die Resultate zeigten, dass Männer gute Voraussetzungen haben, die physischen Voraussetzungen in den unteren Extremitäten bis auf Stufe Elite kontinuierlich zu verbessern. Bei Frauen hingegen erfolgt eine frühe Stagnation der Leistungsentwicklung. Dadurch werden Leistungsunterschiede zwischen Mann und Frau pro Alterskategorie grösser. Keine Unterschiede konnten zwischen Elitenationalkaderathletinnen, respektive Elitenationalkaderathleten und solchen, die diesen Status nie hatten, festgestellt werden.

Nadja Schneider – Inklusive Tanzangebote – Ressourcenbedarf für erwachsene Personen mit einer Querschnittlähmung im Rollstuhl

Betreuerin: Dr. Jenny Adler-Zwahlen

Inklusive Sport- und Bewegungsangebote gewinnen vermehrt an Aufmerksamkeit seit die Konvention über die Rechte von Menschen mit Behinderungen in der Schweiz in Kraft getreten ist. Inklusion bedeutet, dass Personen mit Behinderung möglichst ohne Einschränkung an Aktivitäten mit Personen ohne Behinderung teilnehmen können. Im Fokus dieser Arbeit stehen Menschen mit einer Querschnittlähmung im Rollstuhl und ihre Inklusion in Tanzangeboten. Für Personen mit einer Querschnittlähmung im Rollstuhl ist die Beteiligung an Sportanlässen mit Fussgängern oft mit grossen Hürden verbunden. Tanzen bietet geeignete Ansätze als inklusives Bewegungsangebot für Menschen mit und ohne Behinderung. Das Durchführen von inklusiven Bewegungsangeboten erfordert zusätzliche Ressourcen im Vergleich zu herkömmlichen Angeboten und stellt Lehrpersonen immer wieder vor Herausforderungen.

Das Ziel dieser Arbeit ist es, einen Überblick über die erforderlichen Ressourcen für die Umsetzung inklusiver Tanzangebote für Personen mit Querschnittlähmung im Rollstuhl zu erlangen und Herausforderungen und Chancen für alle Beteiligten aufzuzeigen. Die Ergebnisse dieser Arbeit sollen einen Mehrwert für Tanzschulen schaffen und sie ermutigen und unterstützen, inklusive Tanzangebote anzubieten. Daraus ergeben sich folgende zwei grundlegende Fragestellungen. Erstens: Welche Ressourcen braucht es für die Umsetzung von inklusiven Tanzangeboten für erwachsene Personen mit Querschnittlähmung im Rollstuhl und erwachsene Personen ohne Behinderung aus der Sicht der Tanzlehrpersonen? Zweitens: Welche Herausforderungen und Chancen gibt es bei der Gestaltung von inklusiven Tanzangeboten aus der Sicht der Tanzlehrpersonen?

Als Arbeitsmethode eine empirische Forschungsarbeit gewählt. Drei Tanzlehrpersonen mit Erfahrungen mit Personen im Rollstuhl im Tanzunterricht wurden anlässlich eines semistrukturierten Leitfaden-Interviews einzeln befragt. Die Inhalte des Interviews umfassten drei Kategorien: Ressourcen, Herausforderungen und Chancen von inklusiven Tanzangeboten für querschnittgelähmte Personen im Rollstuhl. Die Interviews wurden transkribiert. Die Inhalte wurden nach Codes ausgewertet, welche den Inhalts-Kategorien zugeordnet wurden.

Ergänzend zu den im Interview-Leitfaden angesprochenen Ressourcen, den Rahmenbedingungen, der Haltung aller Beteiligten zueinander, dem Fachwissen zur Behinderung einer Querschnittlähmung und der Methodenvielfalt, kristallisierten sich mit der Informationsbeschaffung und der Kommunikation zwei weitere Ressourcen heraus. Als Herausforderungen wurden ein zu hohes Tanzniveau in der Klasse, die Vielzahl an Diversitäten beim Krankheitsbild, das Verfügen über eine geeignete Methodenvielfalt, die Informationsbeschaffung zu Unterstützungsmöglichkeiten und Weiterbildung, sowie Kommunikation kursintern wie auch extern beschrieben. Die persönliche Entwicklung von Lehrperson und Teilnehmenden, das gemeinsame Herantasten an persönliche Leistungsgrenzen, das Aufbrechen alter Bewegungsmuster, die Reduktion von Hemmungen und die Förderung der gegenseitigen Akzeptanz wurden als Chancen für alle Beteiligten genannt.

Es kann angenommen werden, dass inklusive Tanzangebote für erwachsene Personen mit einer Querschnittlähmung im Rollstuhl erfolgreich gestaltet werden können, wenn die Ressourcen in ausreichendem Masse verfügbar sind. Diese stehen meist in einer Wechselwirkung zueinander und können zu einer Herausforderung werden, wenn sie nur lückenhaft vorhanden sind. Trotz aller Herausforderungen eröffnen sich auch Chancen für alle Beteiligten, sich als Mensch in Bezug auf Persönlichkeit und Bewegungsrepertoire zu entwickeln. Dies könnte Motivation sein, inklusive Tanzangebote anzubieten.

Diese Arbeit soll einen Überblick von Tanzlehrpersonen für Tanzlehrpersonen zur Bereitstellung inklusiver Tanzangebote für erwachsene Personen mit Querschnittlähmung im Rollstuhl liefern. Abschliessend würde eine Erhebung der Bedürfnisse von Teilnehmenden, Fussgängern und Rollstuhlfahrenden in einer weiteren Studie die Datenlage sinnvoll ergänzen.

Abstract of Master's thesis to receive a special award

Livio Abächerli – Timing of scanning in relation to performance in elite youth female football players during 11v11 match-play

Betreuung: Mirjam Hintermann und Dr. Jörg Fuchslocher

Introduction: In the fast-changing landscape of football, effective scanning is crucial for successful performance and can facilitate players ability to gather essential information about their surroundings. Research has shown that the scanning frequency before ball reception (SF before) influences the success rate of subsequent passes positively. Few studies have emphasized the importance of the moment at which scanning occurs (timing of scanning). So far, the influence of the timing of scanning remains largely unknown. Although previous studies have provided valuable in-sights, further research needs to investigate scanning in a more comprehensive way. The presented study addresses this issue by investigating the SF before and additionally the scanning frequency during ball possession (SF during) as well as the timing of scanning in relation to subsequent pass and dribbling performance (success and direct play), while controlling for opponent pressure and interindividual differences.

The study was conducted with N = 39 female outfield players (age: 17.45 ± 0.88 years) from two elite teams in the Swiss U19 women's national league. Both teams were recorded during two official 11v11 championship matches, resulting in a total of N = 819 events. For each event, video footage was analyzed during the last 10 seconds prior to ball reception until the execution of the subsequent action. For statistical analysis, multilevel logistic regression models were computed and analyzed in relation to the significance of predictor variables and their corresponding odds ratios.

Methods: The findings indicated that the success of subsequent passes was positively influenced by the SF during, whereas the SF before did not significantly affect the success of subsequent passes. Neither the SF before nor the SF during showed any significant influence on dribbling. However, a negative influence of high-pressure conditions was revealed. With regard to direct play, no significant association with the SF before was found. Nevertheless, the likelihood of playing directly was significantly influenced by opponent pressure. In comparison with no pressure, players were more likely to play directly in situations with low, medium, or high pressure. The timing of scanning did not significantly influence the success of subsequent passes or the likelihood of direct play.

Results: Contrary to previous research, the study's findings showed no significant influence on success. Considerations of opponent pressure, inter-individual differences, or general differences between women's and men's football (e.g., play speed) may explain this. The identified positive influence of the SF during on success can be explained in light of fast-changing environments. Thereby, the identified solutions are less likely to evolve due to faster following executions. The absence of significant influences regarding the timing of scanning may be due to the unfavorable examination in relation to the moment of ball reception instead of execution.

Discussion: This study demonstrated the importance of the SF during and opponent pressure on subsequent action performance in women's football. Furthermore, the study emphasizes that further research is required to address the issue of scanning in 11v11 football, considering the influence of SF during and opponent pressure.

William Häni – Changes in Roller Skiing Efficiency during the Preparation Phase of Elite Biathletes and XC Skiers and Influence of Key Aerobic Parameters on On-Snow Skiing Performance

Betreuung: Dr. Tomas Steiner, Elias Bucher und Eva Hofmann

Introduction: $\dot{V}O_2\max$, fractional utilization of $\dot{V}O_2\max$ at lactate threshold (LT), and Gross Efficiency (GE) are key performance factors in Nordic skiing disciplines. While variations in $\dot{V}O_2\max$ following a training regimen are well documented, studies on the evolution of GE remain limited. Additionally, no studies have combined these performance factors to predict on-snow skiing performance.

Aims and Research Questions: This study aims to evaluate changes in GE and $\dot{V}O_2\max$ after a preparation phase and assess whether a combined factor of $\dot{V}O_2\max$, GE, and fractional use of $\dot{V}O_2\max$ at LT better predicts on-snow skiing performance than each factor considered individually.

Methods: Twelve elite biathletes (6 men, 6 women, age: 27.0 ± 3.5 years, $\dot{V}O_2\max$: 69.2 ± 3.7 and 56.2 ± 3.9 mL·kg⁻¹·min⁻¹, respectively) and three female elite XC skiers (age: 24.1 ± 3.8 years, $\dot{V}O_2\max$: 57.4 ± 1.6 mL·kg⁻¹·min⁻¹) participated in this study, concurrently with the FUEL nutrition program. GE using G2, G3, and G4 techniques, and $\dot{V}O_2\max$ were measured at the beginning (T1: June/July) and at the end (T2: October/November) of the preparation phase. Linear regressions were used to evaluate the relationships between the performance factors and on-snow skiing performance for biathletes.

Results: GE decreased ($p < .05$) by 1.8% (both sexes combined) from T1 to T2, with a 3.0% decrease ($p < .05$) in women, while GE remained unchanged ($p = .77$) in men. $\dot{V}O_2\max$ did not change ($p = .07$) for men but increased by 2.9% ($p < .01$) for women. For male biathletes, 99% of the variation in on-snow skiing performance could be explained by the combined factors. No correlation was found for female biathletes.

Discussion: No previous study has reported a GE decrease post-training. The absence of $\dot{V}O_2\max$ evolution in men is consistent with previous studies, while no study has evaluated $\dot{V}O_2\max$ changes in female Nordic skiers during the preparation phase. The concurrent participation of athletes in the FUEL program represents a potential bias. Using the combined performance factor appears promising for predicting the on-snow skiing performance of male biathletes.

Conclusion: Integrating GE tests into the biannual SFISM test battery would allow the use of this combined factor for on-snow skiing performance prediction and verify GE evolution following the preparation phase in Nordic skiers.

Teaching and sports education

In 2024 the department continued its research, development and services for high-quality and effective sport. The Fit on Duty project made a significant contribution to the digitalisation of activities in research and development as well as prevention in the Armed Forces. The research into teaching quality in coaching led to greater professionalisation of the role of coach. The topics of ethics and diversity became a key feature in the FOSPO's degree and continuing education programmes. The department also assumed cross-divisional responsibility for the organisation, administration and quality assurance of teaching.

Monitoring and evaluation

The specialist unit is responsible for providing specialist support in sport and prevention in the Swiss Armed Forces. Training load monitoring reports and programme evaluations were produced. There was also a focus on two major research projects with the Armed Forces. The first of these was the Fit on Duty project, which, as in 2023, involved the collection of data over 15 weeks of recruit school. Recruits permanently wore small sensors on a voluntary basis. This innovative project aims to predict and prevent serious health incidents. The second research project, in which more than 250 candidates have been assessed, investigates the evidence-based selection of special forces.

In the reporting year, there was a focus on analysing the data collected and writing academic papers. International partnerships were cultivated in these research projects, which are also the subject of three PhDs. The specialist unit supervised several Bachelor's and Master's dissertations. It also contributed to the reform of the Bachelor's programme and was involved in student teaching. Experts from the specialist unit also provide evaluation support in other areas of FOSPO (e.g. Y+S and NSM) and manage the evaluation system for the SFISM's degree programmes (EVAS).



Teaching and Sports Education team

Sports education

The specialist unit worked on three projects in 2024:

- Reform of the Bachelor's degree programme. The specialist unit was involved in numerous development activities for the reform. The focus was on conceptual developments for guided self-study and for the aptitude test to be introduced in 2025. Good practice examples were drawn up for guided self-study to support the implementation of this new element to be introduced in the autumn semester 2025. A new pedagogical-psychological diagnostic concept was developed for the future aptitude assessment, which for the first time also assesses candidates' personal aptitude for their future professional field in addition to their motor skills.
- The 'Open Education and Digital Competencies' project funded by swissuniversities. Here 13 higher education institutions are working together to develop and implement open educational platforms and resources (OEPs and OERs). A template for developing an OER was developed and presented at a conference. On this basis, online teaching and learning content will be developed for two modules of the new Bachelor's degree programme in the coming year.
- Teacher training programme developed in cooperation with the Swiss Federal University for Vocational Education and Training (SFUVET). This will enable students to teach sport at vocational schools and will run from the autumn semester of 2025. The organisational and conceptual foundations were developed in the course of 2024. A survey was conducted among Bachelor's students with regard to the studies they intend to pursue, and this revealed a pleasingly high level of interest in this new degree programme.

Integration and prevention

What is needed to create value in sport in Switzerland? How can gender, diversity and ethics skills be encouraged? The specialist unit dealt with these two questions over the course of 2024. The specialist unit worked with Swiss Olympic to develop a range of educational documents in the Ethics in Swiss Sport project. These included a methodological guide, which explains how Swiss Olympic's ethics compass can be used to train ethical skills. The specialist unit was also involved in the 'Understanding diversity, living diversity' project and sensitised various target groups as to their attitudes and behaviour with regard to diversity. Lessons learned from practice were integrated into the Diversity and Values module of the reformed Bachelor's degree programme. The publication series *Viel erleben – Vielfalt leben* was completed in 2024. Seven articles were published, including *Umgang mit Vorurteilen beim Bewegen und Begegnen*. These took a look at the issues surrounding cultural diversity when working with children and young people. Furthermore, two people with a hearing impairment joined the Y+S working group on sport and disability for the first time in 2024. In welcoming these two new members, the specialist unit hopes to better represent those directly affected, as so ensure that future content is targeted more specifically at the relevant groups.

Aus dem Projekt «Lernaufgaben» mit der PH ZH:

Kühnis, J., Steinmann, P., Gramespacher, E. & Ferrari, I. (2024).

Lernaufgaben zur Förderung motorischer Basiskompetenzen in der Eingangsstufe.

In C. Herrmann, H. Seelig & F. Ennigkeit (Hrsg.), *Motorische Basiskompetenzen* (S. 247–261). Wiesbaden: Springer VS.

Mit der Einführung kompetenzorientierter Lehrpläne und zur Erreichung der diesbezüglichen Kompetenzerwartungen hat sich der Bedarf an geeigneten Aufgabenformaten für das Schulfach Bewegung und Sport verstärkt. Um sportunterrichtende Lehrpersonen bei der Formulierung kompetenzorientierter Aufgaben in der Eingangsstufe zu unterstützen, gibt dieser Beitrag eine Orientierungshilfe. Dazu werden im Beitrag ein sportdidaktisches Rahmenmodell wie auch zwei exemplarische, erprobte Lernaufgaben zur Förderung motorischer Basiskompetenzen in der Eingangsstufe vorgestellt.

Martin Flück, Christian Protte, Marie-Noëlle Giraud, Thomas Gsponer and Alain Dössegger

Genotypic Influences on Actuators of Aerobic Performance in Tactical Athletes

<https://doi.org/10.3390/genes15121535>

Background: This study examines genetic variations in the systemic oxygen transport cascade during exhaustive exercise in physically trained tactical athletes. Research goal: To update the information on the distribution of influence of eleven polymorphisms in ten genes, namely ACE (rs1799752), AGT (rs699), MCT1 (rs1049434), HIF1A (rs11549465), COMT (rs4680), CKM (rs8111989), TNC (rs2104772), PTK2 (rs7460 and rs7843014), ACTN3 (rs1815739), and MSTN (rs1805086)—on the connected steps of oxygen transport during aerobic muscle work. Methods: 251 young, healthy tactical athletes (including 12 females) with a systematic physical training history underwent exercise tests, including standardized endurance running with a 12.6 kg vest. Key endurance performance metrics were assessed using ergospirometry, blood sampling, and near-infrared spectroscopy of knee and ankle extensor muscles. The influence of gene polymorphisms on the above performance metrics was analyzed using Bayesian analysis of variance. Results: Subjects exhibited good aerobic fitness (maximal oxygen uptake (VO₂max): 4.3 ± 0.6 L min⁻¹, peak aerobic power: 3.6 W ± 0.7 W kg⁻¹). Energy supply-related gene polymorphisms rs1799752, rs4680, rs1049434, rs7843014, rs11549465, and rs8111989 did not follow the Hardy–Weinberg equilibrium. Polymorphisms in genes that regulate metabolic and contractile features were strongly associated with variability in oxygen transport and metabolism, such as body mass-related VO₂ (rs7843014, rs2104772), cardiac output (rs7460), total muscle hemoglobin content (rs7460, rs4680), oxygen saturation in exercised muscle (rs1049434), and respiration exchange ratio (rs7843014, rs11549465) at first or secondary ventilatory thresholds or VO₂max. Moderate influences were found for mass-related power output. Conclusions: The posterior distribution of effects from genetic modulators of aerobic metabolism and muscle contractility mostly confirmed prior opinions in the direction of association. The observed genetic effects of rs4680 and rs1049434 indicate a crucial role of dopamine- and lactate-modulated muscle perfusion and oxygen metabolism during running, suggesting self-selection in Swiss tactical athletes.

Performance Sport

Major events in the Performance Sport department in 2024 were the opening of the new laboratories in the Lärchenplatz building and the appointment of a new department head. With a new large treadmill, sprint tunnel, diagnostics hall and modern facilities for rehabilitation and regeneration, Magglingen offers top infrastructure for performance diagnostics, research and the treatment of athletes. The range of services offered in both physical and mental health is being developed in close cooperation with the Swiss sports associations. New projects, including 'From a Pyramid to a Square in Understanding Youth Athletes' Mental Health' and 'Mind to Win', have been approved and can now be launched.



Number of athletes: 549

Number of tests: 1269

Sports Physiology (strength)

The 90-metre long sprint tunnel went into operation in 2024. Thanks to the built-in technology, including force plates and tracking methods for capturing and recording movements, the individual steps taken during a sprint can be analysed down to the smallest detail. The first scientific projects have already been launched in conjunction with Swiss Athletics. The number of tests carried out in this area once again set a new record. Athletes from 19 different sports (national squads only) and 35% of the Swiss Olympic athletes for Paris 2024 benefited from the complex two-part test to record maximum and explosive strength and the detailed training recommendations derived from the results. In addition, the specific strength training programme for athletes in elite sport was expanded and an interesting research project conducted on the braking abilities of floorball players. The testing team also supported youth athletes at the Swiss Olympic Talent Treff Tenero (3T) on two occasions. The faculty taught on all university programmes of the SFISM (Bachelor's, Master's, Sports Coach Training) and gave lectures at international conferences and symposia. Furthermore, the team published an original article on the influence of pre-activation on jumping performance and supervised five dissertations.



Number of athletes: 72

Number of tests: 128

Treadmill

- Belt: 4.5 × 3m
- Weight: 11.5 tonnes
- Max. speed: 50 km/hr
- Max. gradient: 25%

Sports Physiology (endurance)

At the beginning of the year, the Sports Physiology (endurance) team completed the move of the running, cycling, blood volume and Nordic laboratories from the Nordic Pavilion to the new Lärchenplatz building. The high point was the installation of the new large treadmill, called 'the Beast', which is used by athletes in the cross-country skiing, biathlon, mountain biking and cycling disciplines. The move went very smoothly and thanks to the highly committed staff, performance diagnostics tests with the endurance athletes were able to continue seamlessly and at a high quality. The team also supported a number of major scientific projects run by sports associations in the run-up to the Summer Olympics in Paris. The first support projects for the 2026 Winter Olympics in Turin were launched. Along with international partners (Finland and the US), the department published a groundbreaking paper on altitude training in the Journal of Applied Physiology and gave presentations at international conferences. In teaching, the team supervised a number of courses in the Bachelor's and Master's degree programmes and organised the vivas for the Master's in Elite Sports.



Performance Sport team



Number of athletes: 841

Number of tests: 5616

Game Sports

The move to the new Lärchenplatz building was a milestone for the Sports Physiology (game sports) team. The new games sports strength laboratory, the diagnostics hall and the sprint tunnel offer optimal conditions for tests in games. Having all devices installed under one roof has simplified organisation considerably and makes testing more efficient.

A further focus was the setting up of a test battery in the new environment for teams and athletes from the national ice hockey, football and handball associations.

New integrated diagnostic technologies, in particular 3D force plates, allow the development of innovative test procedures that map the specific forms of movement of games sports even more precisely. New forms of testing have already been used with football goalkeepers.

The promotion of women's sport was a key focus of the Sport physiology (game sports) team in 2024. One highlight was the launch of the interdisciplinary study 'How much is enough?', which analysed more than 200 talented young female footballers in the U20 championship over the course of a year. This study analyses the incidence of physical and mental health problems associated with sport and life stress in order to improve care and injury prevention in women's football.

Furthermore, comprehensive performance tests were carried out for the first time with the national women's handball team in preparation for the European Championships, held in Switzerland.

By combining research and practical application, the sports physiology team contributes actively to optimising performance and promoting health in women's sport, and supports the professionalisation of women's sport in Switzerland.

Technique and Tactics

The Technique and Tactics department focused its activities on teaching and research into the development of technical and tactical skills in youth competitive sport. In addition, various service projects, including for Swiss Olympic, were successfully pursued. The team continues to work with the Coaching Science group on projects in competition design in both professional and amateur sports. The majority of enquiries from sports associations on issues relating to Technique and Tactics were addressed in consultations and seminars.

A PhD student in the department conducted research into the gaze behaviour of young female footballers immediately before possession of the ball and published an initial study on the topic. In conjunction with the Swiss Football Association and the University of Bern, the department conducted a comprehensive training study on improving match intelligence.

There were additional activities in various training programmes and an increase in the amount of teaching. The department was also actively involved in further developing a range of teaching and learning materials, including for youth and sport. Moreover, it moved forward with its plans for the new Bachelor's degree programme starting next year. Some important findings also emerged from the supervision of student papers on tactical performance parameters in game sports, which allow match intelligence in youth football to be systematically assessed.

Coaching Science

The Coaching Science group can look back on a successful year characterised by progress in combining science and practice, promoting talent and supporting sports associations.

As part of the Smart Competitions project, it worked with Swiss Olympic to develop customised forms of competition that promote the sustainable development of athletes. The Player Labelling project enabled the Swiss Football Association (SFA) to make more targeted selection decisions by incorporating biological age data. A study conducted with Swiss Aquatics analysed the transfer of strength from athletic training on land to swimming performance in the water. The results were used directly to optimise training content.

Three PhD projects with the SFA, Swiss Aquatics and Swiss-Ski are investigating long-term performance development in young athletes, key performance indicators and injury prevention. In addition, the Coaching Science group supported Swiss-Ski and Swiss Aquatics with performance diagnostics and performance analyses, helped Swiss Athletics with the coaching of athletes, and provided the SFA with scientific advice, e.g. on percentile curves for young athletes. Group members integrated the knowledge gained into teaching and further training in order to ensure that knowledge is transferred to practice.

Sports Psychology

The Mental Health of Swiss Elite Athletes project funded by the Swiss National Science Foundation (SNSF) came to a successful close. Among other things, it analysed the prevalence of mental illness and measures to promote mental health in the Swiss sports system. A PhD was also completed as part of the project.

Several milestones were reached in a project to develop and validate a pupil-based biofeedback system in a virtual reality environment, also funded by the SNSF and carried out in collaboration with ETH Zurich. The acquisition of third-party funding was extremely successful: the SNSF is funding the 'From a Pyramid to a Square in Understanding Youth Athletes' Mental Health' project and Swiss Olympic, together with five game sports associations, is funding 'Mind to Win'. Both projects will run for four years.

Modules were taught in the SFISM Bachelor's and Master's programmes and for Sports Coach Education Switzerland. Some staff taught externally at the University of Applied Sciences and Arts Northwestern Switzerland and on courses at the University of Bern and Zurich University of Applied Sciences. Important services were provided, e.g. for athletes at the Elite Sport Training School for Recruits, for Swiss Shooting, Swiss Handball, the Swiss Athletics Federation and the Swiss Football Association. There has been a shift from working with individual athletes to working with teams and groups and to developing concepts for associations.



Cooperation with sports associations

- Swiss Olympic
- Swiss Ski
- Swiss Ice Hockey Federation
- Swiss Athletics
- Swiss Cycling
- Swiss Aquatics
- Swiss Triathlon
- Swiss Shooting
- Swiss Football Association
- Swiss Handball Association
- Swiss Gymnastics Association



Sports psychology counselling: 380



Medical consultations: 826



Physiotherapy treatments: 4494

Massages: 1499

Sports Medicine

Now housed in the new premises, the Sports Medicine staff continued to focus on the care of top and junior athletes in the event of acute illnesses and injuries, as well as on prevention. One major challenge throughout the year was absences in the medical team, which unfortunately could not be entirely filled. Nevertheless, as in previous years, preventive sports medical examinations were carried out in 19 sports. A third of the athletes examined were French- or Italian-speaking, and around two thirds were female.

Group members engaged in teaching with the same enthusiasm as in previous years, supervising medical students and giving lectures and courses in the Sports Science Bachelor's and Master's and Sports Coach Education programmes. Research and interprofessional collaboration focused on topics such as 'Women and Sport' and the holistic care of athletes in competitive sport.

Sports Physiotherapy

The Sports Physiotherapy department continued to improve its standards in the new premises. Its aim is to promote athletes' performance, prevent injuries and ensure a safe return to sport through precise diagnostics, individualised care and the use of the latest rehabilitation methods.

The new sports physiotherapy premises at Lärchenplatz were put into operation; following minor adjustments, day-to-day operations are running smoothly and meet the expectations of the athletes and the entire physiotherapy team. Rehabilitation and sport-specific training can be optimally combined thanks to the separate areas for treatments, strength training and functional training. In particular, the newly designed weight and training room allows coaches to accompany their athletes directly on the premises. This improves communication and encourages the necessary interdisciplinary cooperation between physiotherapists and coaches.

The new aqua regeneration centre and massage regeneration area extend the regeneration services. They contribute greatly to optimising the balance between exertion and recovery and to supporting the physical regeneration of athletes during long rehabilitation and training phases.

The department focused intensively on the topics of 'Cognition in rehabilitation' and 'Speed-controlled strength training', the aim being to develop practice-oriented guidelines for targeted application at the various phases of rehabilitation. Integrating these new approaches improves the rehabilitation concept and allows athletes to prepare even more effectively for their return to competitive sport.

Staff members continued their usual teaching activities alongside these developments.

Hintermann, M., Romann, M., Schmid, J., Taube, W., & Fuchslocher, J. (2024).

The influence of scanning behaviour on performance during 4v4 small-sided games in youth female football.

Journal of Sports Sciences, 42(21), 1977–1985.

<https://doi.org/10.1080/02640414.2024.2421662>

Scanning is an important perceptual skill that enables football players to gather information about opponents, teammates and the environment in real-time. This study investigated scanning before and during ball possession and its effect on the success of the subsequent action in U19 female footballers. Sixty-one elite and grassroots players (age: 16.7 ± 1.4) were recruited and analysed during 4v4 small-sided games. A total of 2010 game situations were video recorded for subsequent manual tagging. Multilevel logistic regression models revealed that elite players performed significantly more scans prior to first ball contact than their grassroots counterparts, but the number of scans performed during ball possession did not differ between competition levels. Furthermore, scans before and during ball possession positively influenced player's performance, whereas opponent pressure negatively influenced the success of subsequent actions, regardless of competition level. Differentiating between various subsequent actions revealed that scans before ball possession had a positive effect on the success of dribblings and passes, whereas scans during ball possession only had a positive effect on dribblings. Our results underline the importance of scanning in youth female football. These findings should be considered by coaches in the long-term development of players to increase the level of performance at elite age.

Born, D.-P., Burkhardt, D., Buck, M., Schwab, L., & Romann, M. (2024).

Key performance indicators and reference values for turn performance in elite youth, junior and adult swimmers.

Sports Biomechanics, 1–21.

<https://doi.org/10.1080/14763141.2024.2409657>

This study aimed to determine kinematic and kinetic key performance indicators (KPI) of swimming turn performance using principal component analysis (PCA) and multiple linear regression analysis and provide reference values using percentiles. Touch and tumble turn performances of male ($n=68$) and female ($n=48$) Swiss national team members from three age categories—adult (20.2 ± 2.7 yrs, 790 ± 57 points), junior (16.2 ± 0.8 yrs, 729 ± 53 points) and youth swimmers (14.4 ± 1.0 years of age, 667 ± 53 World Aquatics swimming points, respectively)—were assessed with a motion analysis system equipped with a force plate on the pool wall, one over- and four underwater cameras sampling forces at 500 Hz and footages at 100 Hz. The PCA reduced the 27 original variables by up to 15% depending on turn type and age category using Varimax component loading of >0.6 and explained up to 91% of the total variance. The highest Varimax component loadings for each principal component were used to determine KPI for each turn type and age category using multiple-regression analysis with total turn time as dependent variable. These KPI should be used to interpret turn performances and identify individual swimmers' strengths, weaknesses and future potentials with the help of the percentiles as reference values.

Sports Economics

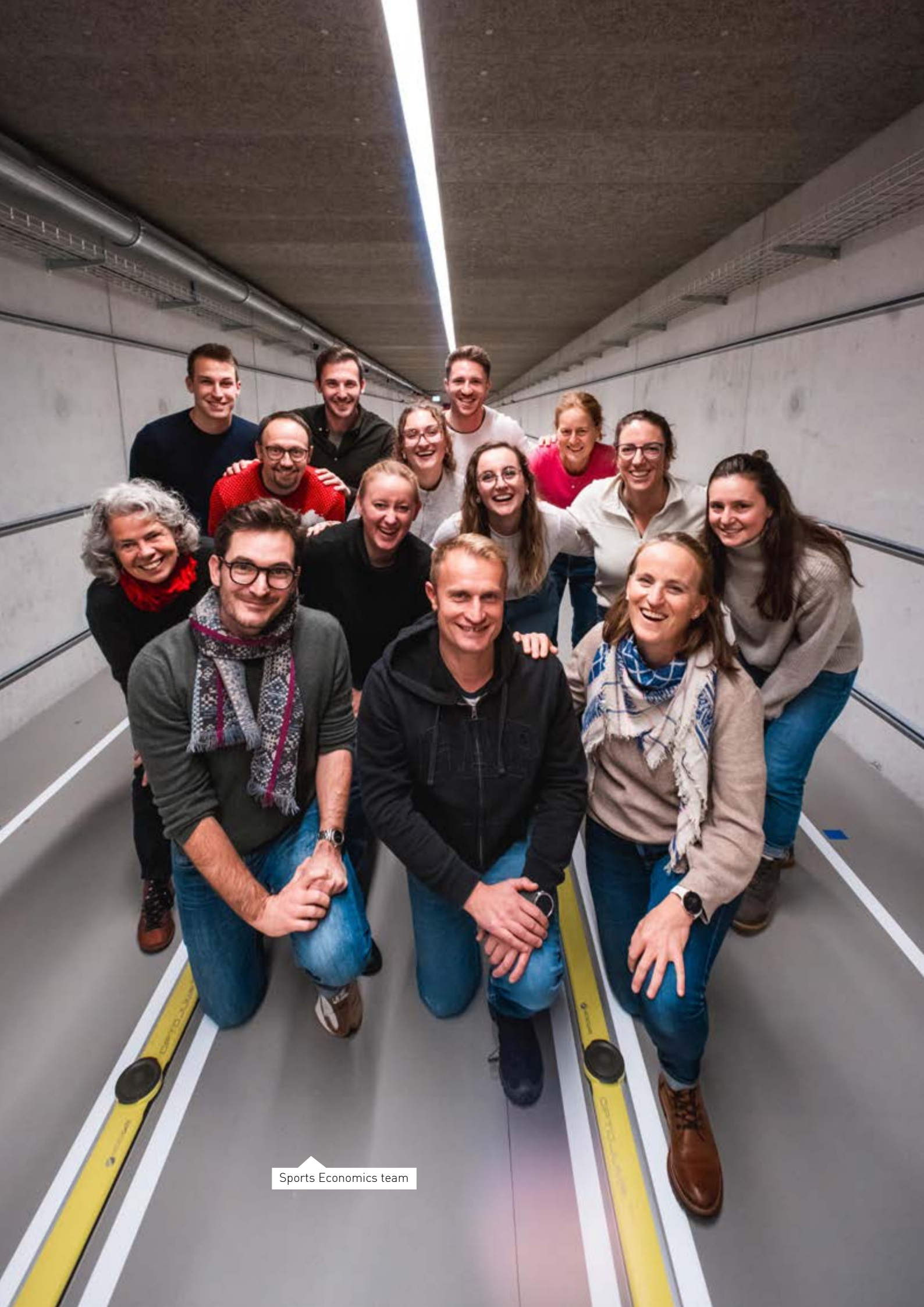
In 2024, the Sports Economics department continued to move forward in the areas of continuing education, research and innovation. In particular, it focused on implementing three new continuing education programmes in sports facility management, national sports systems and national sports associations. The Sports Facilities unit conducted numerous consultations and ran the CAS EHSM Sports Facilities. The year was also marked by the development of an innovation project for the training of athletes and the publication of an analysis report on Switzerland's results at the 2024 Olympic Games in Paris.

Sports Systems unit

The focus of the Sports Systems unit's teaching activities was the start of the new Master's degree programme in Elite Sport 2024-25, launched with the block days in Tenero. Following a visit to the TV programme Sportpanorama, students specialising in Sports Management and Coaching Science spent two days working on the topic 'Competitive sport in Switzerland', on the basis of a study by Kempf et al. (2021). The topic was addressed didactically in the form of a conference consisting of various keynote speeches, sessions with short presentations by the students, workshops and a leisure programme. The autumn saw the launch of the new CAS in Strategic and Sustainable Sports System Development. The unit also carried out conceptual work for the reform of the Bachelor's degree programme.

In research and development, the focus was on the mediation of athletes in social media and international competition in sport between nations at the Olympic Games. The latter was published in collaboration with the SPLISS consortium (Sports Policy Factors Leading to International Sporting Success) in the report entitled 'Paris 2024: Evaluation of the elite sport expenditure and success of 17 nations' by De Bosscher, Shibli, Smismans, Weber et al. (2024). The unit gave a range of presentations at both the 32nd conference of the European Association for Sport Management (EASM) and at the 11th International Sport Business Symposium in Paris.

In the area of services, the unit pursued and completed a project for the Swiss Armed Forces involving a comparative analysis of the funding of elite sport for athletes by the armed forces and customs in neighbouring countries. It also continued the business intelligence pilot project for Swiss Olympic on the use of data visualisation using PowerBI, and prepared selected data to classify summer sports 2024-2027 according to their social importance. Furthermore, in the Swiss Olympic Park project Swiss Olympic commissioned the unit to develop a labelling system for research and performance centres by mid-2025.



Sports Economics team



**Publication series relating to
the planning, construction and operation
of sports facilities**

- 25 (German/French)
- 3 (German/French/Italian)

Total: 28

The documents can be ordered as a printed version or downloaded as a free PDF from www.basposhop.ch

Another major milestone was the successful organisation of the 4th Sports Management Conference, which addressed the question of athlete empowerment in the sports system. The conference was held in conjunction with partners Swiss Sport Managers, Think Sport, Swiss Olympic and Swiss Coach.

Sports facilities centre

The reporting year was marked by the sudden death of the head of the unit, Niklaus Schwarz, in March. Niklaus played a key role in shaping the Sports Facilities unit at FOSPO. He was well connected both nationally and internationally and his expertise was highly valued by all. His work and his personality will be fondly remembered.

Despite reduced staff resources, most of the activities and services planned were successfully concluded. For example, the CAS in SFISM Sports Facilities was run for the eighth time (more on this in the chapter on Education and Training). Around 120 participants were once again welcomed to the symposium on regional financing of sports facilities. Input from the corporate world and SECO formed the factual basis for the presentations on practical examples. The verbal and written feedback demonstrated the importance of exploiting regional synergies and joint financing. In 2024 it was once again possible to offer around 140 telephone and written advice sessions. The updating of publications had to be postponed until next year due to reduced capacity.

Organisational Development unit

In 2024, the unit's research activities focused primarily on the development and communication of values in Swiss sports clubs. A PhD project was set up with the University of Lausanne and an anthology on the topic of sports management in Europe was published and edited with the research partners. At the same time, an innovation project supported by Think Sport was launched to train athletes with the help of artificial intelligence. It draws primarily on the unit's experience in career management for elite athletes, with a particular focus on elite sport recruits. In the field of teaching, the unit developed a new continuing education product on sports organisation management. The first training module on analysing trends and the environment of sports organisations took place in Magglingen in October in conjunction with Swiss Olympic and the Institut für Verbands-, Stiftungs- und Genossenschaftsmanagement (VMI).

De Bosscher, V., Shibli, S., Smismans, S., Weber, A.C., et al. (2024)

Paris 2024. Evaluation of the Elite Sport Expenditure and Success of 17 Nations.

[SPLISS evaluatie Parijs Olympische Spelen_V2-final pdf_0.pdf](#)

In the run-up to the Paris 2024 Olympic and Paralympic Games, the SPLISS consortium invited nations with an interest in elite sport development systems to (voluntarily) take part in an exercise to quantify their nationally coordinated expenditure on elite sport. In total, 17 nations accepted the challenge and participated in a benchmark study called SPLISS Pillar 1 – Light 2024. This report aims to evaluate the financial support for elite sport and to analyse the success achieved at the Paris 2024 Olympic Games. Funding is the first Pillar of the nine Pillar SPLISS model and quantifies the most important input to the process of producing elite athletes capable of competing at the highest level of international sport. The objective for each nation is to be efficient with their financial budgets, striving to achieve optimal performance (i.e. outputs) with minimal support. This is an indicator of the efficiency of elite sport investments and the effectiveness of policies. The processes that show how funding is invested and how elite sport policy is developed in each nation, are not measured in this SPLISS Pillar 1 – Light 2024 study. This is reflected by Pillars 2-9, which are indicators of the throughput stage. Finally, as ever more nations strive for Olympic success by investing strategically in elite sport, resulting in increasing government funding globally, there has been a clear shift in discourse amongst these governments from winning Olympic medals to delivering societal outcomes or impact such as togetherness, national pride and identity, wellbeing, and boosting grassroots sport participation.

Mrkonjic, M., Weber A.C., and Pillet F. (2024)

Event Governance – *Routledge Encyclopedia in Sport Studies*

<https://doi.org/10.4324/9780367766924-RESS55-1>

This contribution reviews the main characteristics of the event's life cycle including recent examples of international events, describes the special features of organising committees, and presents a network of stakeholders that are associated with the organisation of an event in a networked perspective.

Sports Coach Education Switzerland

In addition to running its regular courses, in 2024 Sports Coach Education Switzerland focused on its new concept for the specialisation in athletics and on international cooperation in the Global Coaches House in Paris. The staff also did much to promote ethics in sport, women and elite sport, as well as to strengthen and optimise internal structures.



Professional coach training 92 students	●●●● Women	11
	▨▨▨▨ Men	81
	■ German-speaking	66
	■ French-speaking	26
	■ Italian-speaking	-

Coaching diploma course

12 participants

New concept for specialisation in athletics

Sports Coach Education Switzerland took important steps to thoroughly revise the specialisation in athletics. The new athletics course, which will be offered from 2025, is aimed at coaches in elite sport and takes into account the growing demands in athletics coaching. The aim is to impart practice-orientated and scientifically sound skills that ensure optimal support for athletes. The course focuses on training planning, load management and the practical application of the latest scientific findings in order to raise the quality of athletics training at elite sporting level.

Global Coaches House in Paris

The Sports Coach Education department was actively involved in Global Coaches House, a platform which gives sports coaches from around the world the opportunity to discuss innovative approaches and current issues, and thereby learn from each other. At the event, which took place in parallel to the 2024 Summer Olympics in Paris, participants from Switzerland gained valuable inputs for improving their coaching strategies and were able to build their international networks. The insights gained in Paris will be incorporated into future projects of Sports Coach Education Switzerland and so boost the exchange of knowledge and experience.

2024 Magglingen Coaching Conference

Is it better to think long term or act short term? Does innovation make sense without tradition? How can experience be combined with evidence? At the 2024 Magglingen Coaching Conference, it became clear that success does not lie in making a choice between one or the other, but in the interplay of these seemingly opposing aspects. Because only coaches who build bridges between poles will be successful long term. Experts and coaches discussed how opposites can be balanced to achieve long-term success. Keynote speeches and workshops provided practical approaches, for example the linking of innovative methods with proven traditions or of data-based analyses with actual experience.



Sports Coach Education team



Coach in Competitive Sports, Federal Diploma of Higher Education

Participants: 80 Passed: 56



Coaches counseling

112 with case supervision

Coach Developer

Participants: 26

Training courses

Participants: 2190

Ethics in sport

Sports Coach Education Switzerland made a substantial contribution to the Ethics in Sport project in 2024. Among other things, its staff drew up case studies for the Ethics Compass that focus specifically on competitive sport. The aim was to further sensitise coaches to ethical issues and to promote value-based behaviour in their day-to-day work. The staff also worked to ensure that ethical guidelines are firmly embedded and implemented in a range of coaching formats.

Women-specific issues in competitive sport

Women-specific issues in competitive sport was a further area addressed by Sports Coach Education Switzerland in the reporting year. The focus was on mental health, communicating women-specific issues, puberty and promoting young talent. The aim was to provide coaches and athletes with targeted support and to focus more closely on individual needs. Under the project leadership of Swiss Olympic, the department developed support programmes designed to help coaches and athletes alike meet these challenges.

Initiative to promote sports coaches

An initiative to promote sports coaches in Switzerland (Trainer/-innen-Initiative Schweiz) was launched in September 2024 under the leadership of swiss coach. It is being implemented along with Swiss Olympic, Sports Coach Education Switzerland and the Swiss sports associations. The aim of the project, which runs until 2026, is to increase the attractiveness of the profession of coach, focusing on topics such as recruitment, improved working conditions and greater social recognition. The Sports Coach Education Switzerland staff were closely involved in the project and steering group, identifying action areas in which long-term prospects can be created.

In-house development projects

The Sports Coach Education department continued developing its own ecosystem in the reporting year. The aim is to establish agile management structures with distributed authority and so meet the requirements of the modern working world. The staff also worked on overarching tasks such as partner management, communication and research and development in order to continue improving efficiency and cooperation within the department. A number of working groups also engaged in closer interdisciplinary dialogue to encourage innovative solutions and develop the SFISM further.

Authors: SFISM staff

Photos: Charlène Mamie, FOSPO

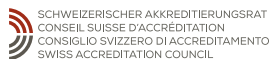
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